Honeywell

equIP® Series 720p TDN Rugged Network IR Minidome Camera

NTSC / PAL

H4D1FR1 H4D1FR1X

User Guide

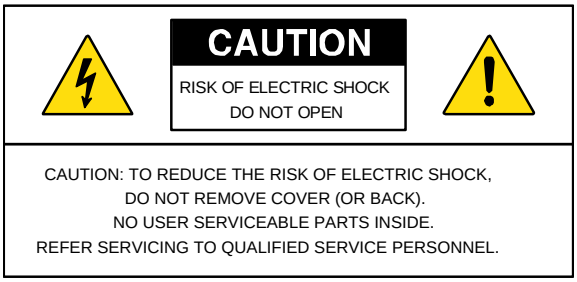
Document 800-12606 – Rev A – 03/2013

User Guide

Revisions

Issue	Date	Revisions
A	03/2013	New document.

Cautions and Warnings


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING **IR emitted from this product. Do not view directly with optical instruments (magnifiers). Do not stare directly into the lamp at a distance of less than 3.3 ft (1 m).**

CAUTION **Class 1 LED product. Invisible LED radiation (850 nm). Avoid exposure to beam.**

CAUTION **Installation and servicing should be performed only by qualified and experienced technicians to conform to all local codes and to maintain your warranty.**

CAUTION **24 VAC models require the use of CSA Certified/UL Listed Class 2 power adapters to ensure compliance with electrical safety standards. Power over Ethernet (PoE) should meet the IEEE 802.3af PoE standard.**

Regulatory Statements

FCC Compliance Statement

Information to the User This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canadian Compliance Statement

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la Classe A est conforme à la norme NMB-003 du Canada.

Manufacturer's Declaration of Conformance

North America The equipment supplied with this guide conforms to UL 60950-1 and CSA C22.2 No. 60950-1.

Europe The manufacturer declares that the equipment supplied is compliant with the essential requirements of the EMC directive 2004/108/EC, conforming to the requirements of standards EN 55022 for emissions, EN 50130-4 for immunity, and EN 60950-1 for electrical equipment safety.

Waste Electrical and Electronic Equipment (WEEE)

Correct Disposal of this Product (applicable in the European Union and other European countries with separate collection systems).

This product should be disposed of, at the end of its useful life, as per applicable local laws, regulations, and procedures.

Safety Instructions

Before installing or operating the unit, read and follow all instructions. After installation, retain the safety and operating instructions for future reference.

1. **HEED WARNINGS** - Adhere to all warnings on the unit and in the operating instructions.
2. **INSTALLATION**
   - Install in accordance with the manufacturer's instructions.
   - Installation and servicing should be performed only by qualified and experienced technicians to conform to all local codes and to maintain your warranty.
   - Do not install the unit in an extremely hot or humid location, or in a place subject to dust or mechanical vibration. The unit is not designed to be waterproof. Exposure to rain or water may damage the unit.
   - Any wall or ceiling mounting of the product should follow the manufacturer's instructions and use a mounting kit approved or recommended by the manufacturer.
3. **POWER SOURCES** - This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your facility, consult your product dealer or local power company.
4. **HEAT** - Situate away from items that produce heat or are heat sources such as radiators, heat registers, stoves, or other products (including amplifiers).
5. **WATER AND MOISTURE** - Do not use this unit near water or in an unprotected outdoor installation, or any area classified as a wet location.
6. **MOUNTING SYSTEM -** Use only with a mounting system recommended by the manufacturer, or sold with the product.
7. **ATTACHMENTS** - Do not use attachments not recommended by the product manufacturer as they may result in the risk of fire, electric shock, or injury to persons.
8. **ACCESSORIES** - Only use accessories specified by the manufacturer.
9. **CLEANING** - Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
10. **SERVICING** - Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
11. **REPLACEMENT PARTS** - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards. Using replacement parts or accessories other than the original manufacturers may invalidate the warranty.
12. **DAMAGE REQUIRING SERVICE** - Unplug the unit from the outlet and refer servicing to qualified service personnel under the following conditions:
    - When the power-supply cord or plug is damaged.
    - If liquid has been spilled, or objects have fallen into the unit.
    - If the unit has been exposed to rain or water.
    - If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
    - If the unit has been dropped or the enclosure has been damaged.
    - When the unit exhibits a distinct change in performance - this indicates a need for service.
13. **SAFETY CHECK** - Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.

Warranty and Service

Subject to the terms and conditions listed on the Product warranty, during the warranty period Honeywell will repair or replace, at its sole option, free of charge, any defective products returned prepaid.

In the event that you have a problem with any Honeywell product, please call Customer Service at 1.800.323.4576 for assistance or to request a **Return Merchandise Authorization (RMA)** number.

Be sure to have the model number, serial number, and the nature of the problem available for the technical service representative.

Prior authorization must be obtained for all returns, exchanges, or credits. **Items shipped to Honeywell without a clearly identified Return Merchandise Authorization (RMA) number may be refused.**

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About This Document

This document contains instructions for installing, configuring, and operating the Honeywell equIP® Series H4D1FR1(X) network camera.

This document is intended for system installers, administrators, and operators.

Overview of Contents

This document contains the following chapters and appendixes:

- *Chapter 1, Introduction*, introduces the H4D1FR1(X).
- *Chapter 2, Installing the Camera*, describes how to mount the camera, connect the cables, and adjust the camera's field of view.
- *Chapter 3, Installing the Honeywell IP Utility*, describes how to install the Honeywell IP Utility, connect to a network camera, configure the camera's IP network settings, and change the camera's password.
- *Chapter 4, Setting Up the Camera*, describes how to configure camera settings using the web client.
- *Appendix A, Troubleshooting*, lists solutions to problems encountered during installation.
- *Appendix B, Specifications*, lists the specifications of the H4D1FR1(X).

Related Documents

For more information, please refer to the following documents:

Document title	Part number	Description
equIP® Series H4D1FR1(X) 720p TDN Rugged Network IR Minidome Camera Quick Installation Guide	800-12607V1	Installation guide

Typographical Conventions

This document uses the following typographical conventions:

Font	What it represents	Example
Helvetica	Keys on the keyboard	Press Ctrl+C
Lucida	Values of editable fields that are mentioned in the body text of the document for reference purposes, but do not need to be entered as part of a procedure	The **Time from** field can be set to `Hours:Minute:Seconds`.
	Text strings displayed on the screen	The message `Unauthorized` displays.
	Syntax	`(object) entered`
Swiss721 BT Bold	Words or characters that you must type. The word “enter” is used if you must type text and then press the Enter or Return key.	Enter the **password**.
	Menu titles and other items you select	Double-click **Open** from the **File** menu.
	Buttons you click to perform actions	Click **Exit** to close the program.
Italic	Placeholders: words that vary depending on the situation	Enter your *user name*.
	Cross-reference to external source	Refer to the *System Administrator Guide*.
	Cross-reference within document	See *Chapter 2, Installation*.

1

Introduction

Honeywell's ONVIF IR H4D1FR1(X) IP network camera provides high quality video surveillance over a network connection.

Features

- Outstanding image quality, 720p (1280 x 720) HD resolution
- 30 fps (25 fps PAL) progressive scan
- True day/night, 3.3–12 mm VFAI lens with removable IR cut filter
- 24 LEDs provide up to 50 ft (15 m) of illumination, depending on scene reflectance
- Camera tamper detection
- Video motion detection
- NTP time synchronization support
- ONVIF support (Profile S)
- Programmable daylight threshold settings to deliver color or black-and-white images.
- Dual digital video streams, independently configurable, H.264 and/or H.264/MJPEG
- Remote firmware updates
- Supports both dynamic and static IP addresses
- Date and time stamp embedded in video stream
- Multiple browser support (Microsoft Internet Explorer, Google Chrome, Mozilla Firefox)
- Advanced IP Utility software for easy system setup
- Embedded web server for remote setup of camera video and network parameters
- Choice of 24 V AC or Power over Ethernet (IEEE 802.3af) power inputs
- Impact-resistant polycarbonate dome cover
- IP66 ingress protection rating
- Single model for surface mount and recessed ceiling applications
- Wall and pendant mount kits available

2

Installing the Camera

This chapter describes how to:

- Mount the camera (*page 21*)
- Connect the cables (*page 24*)
- Adjust the camera for the clearest image (*page 25*)

Before You Begin

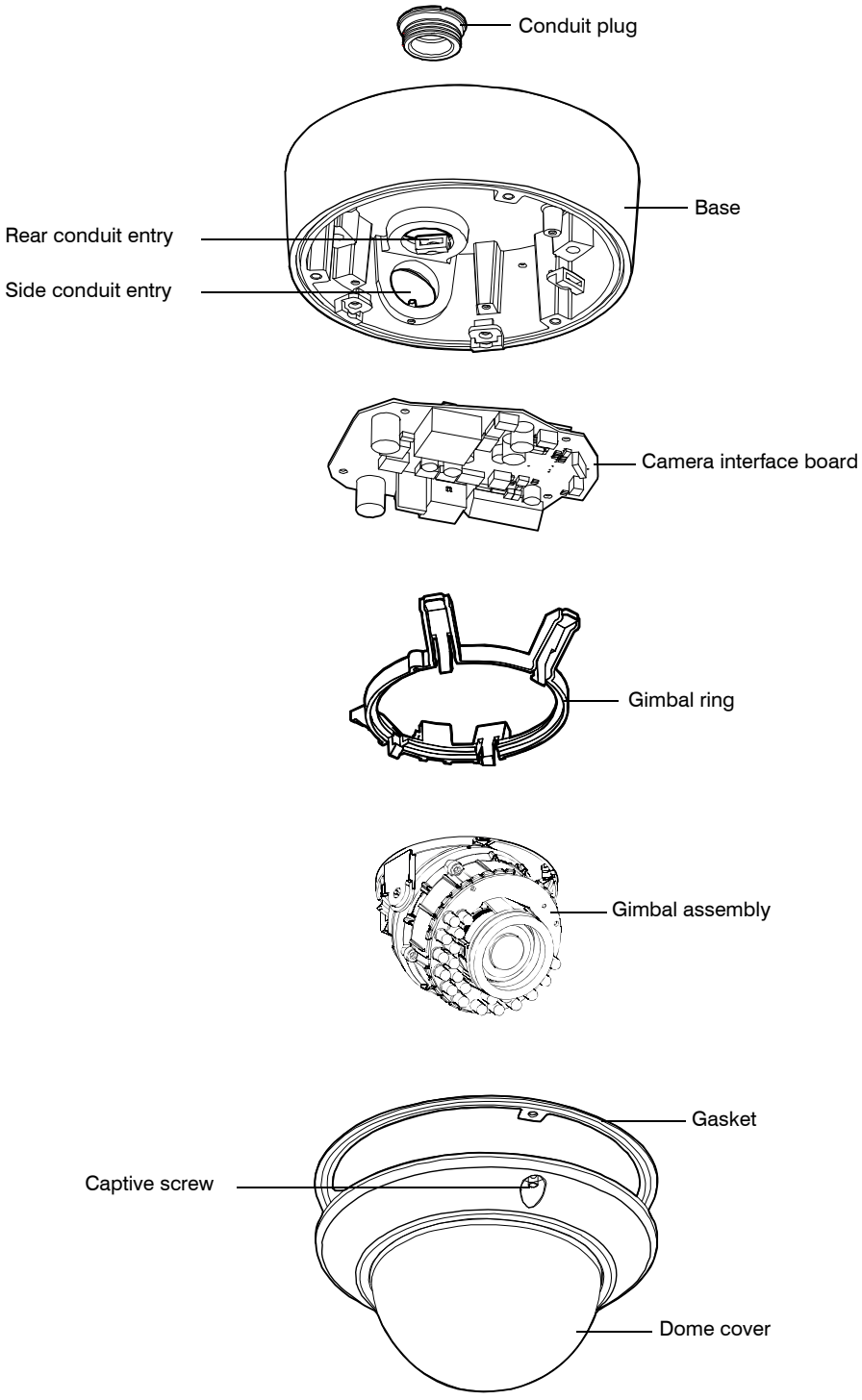
Check that the items received match those listed on the order form and packing slip. Your camera packing box should include the following items:

Table 2-1 Parts List

Qty	Item
1	Camera unit
1	Mounting kit: • M5×40 screws (3) • Screw anchors (3) • Rubber washers (3) • Allen keys (2)
1	Wiring kit: • Power connector (1) • M4×7 screws (2) • BNC connector (1) • Cable clamps (2)
1	Mounting template
1	Rubber gasket
1	Software DVD (includes user guide)
1	Quick installation guide (800-12607V1)
1	Product warranty

If any parts are missing or damaged, contact the dealer you purchased the camera from or call Honeywell Customer Service.

Parts of the Camera



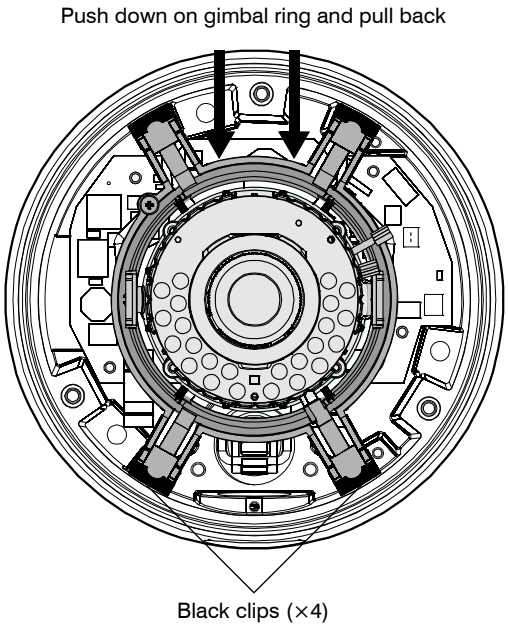
Preparing to Mount the Camera

Preparing the Camera

1. Using the supplied Allen key, loosen the three captive screws on the dome cover, and then remove the dome cover and set it aside.
2. Release the gimbal assembly from camera base.

   To release the gimbal assembly, push down on the gimbal ring with two fingers (see *Figure 2-1*) and pull back to slide the gimbal leg supports out of the black clips on the camera base.

Figure 2-1 Removing the Gimbal from the Camera Base



3. Carefully lift the gimbal assembly away from the camera base to expose the camera interface board connections and the mounting holes.

CAUTION When moving the gimbal, make sure that you do not pull and over-stress the two ribbon cables.

Preparing the Mounting Surface

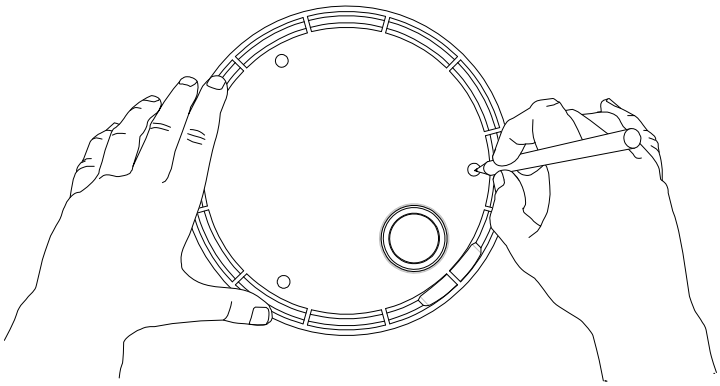
Note The housing should be mounted on a flat surface only.

Note To prevent moisture from entering the housing, position the camera base with the side conduit entry pointing down if you are mounting the camera on a wall or other vertical surface.

1. Use the supplied mounting template to mark the screw and access cable holes on the mounting surface.

   Alternatively, place the camera base against the mounting surface and trace the screw holes (see *Figure 2-2*).

Figure 2-2 Tracing the Camera Base

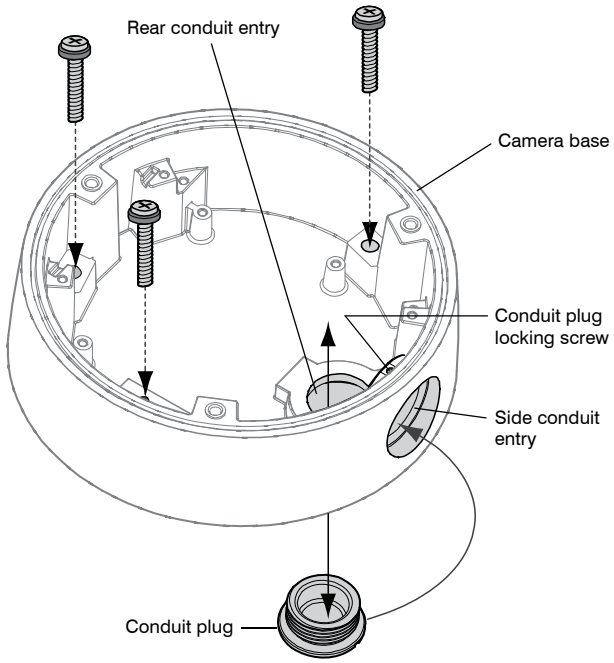


2. Pre-drill holes in the mounting surface, as required.

Feeding the Cables

There are two conduit entry points on the camera base: one at the rear and one on the side. The camera ships with the conduit plug pre-installed in the rear conduit entry.

Figure 2-3 Conduit Holes on Camera Base



To use the rear conduit entry

1. Unscrew the conduit plug from the rear conduit entry (see *Figure 2-3*).
2. Loosen the locking screw over the side conduit entry, install the conduit plug in the side conduit entry, and then re-tighten the locking screw to secure the conduit plug in place.
3. Follow these steps:

If conduit is used (recommended)	If conduit is not used
1. Insert the conduit into the rear conduit entry. 2. Apply sealant around the conduit entry to prevent moisture from entering the housing.	1. Install the supplied rubber gasket on the camera base with the "+" positioned over the rear conduit entry. 2. Make a slit in the gasket over the "+". 3. Feed the cables through the slit. 4. Apply sealant around the gasket to prevent moisture from entering the housing.

To use the side conduit entry

1. Loosen the locking screw over the side conduit entry (see *Figure 2-3*), insert the conduit, and then re-tighten the locking screw to secure the conduit in place.
2. Apply sealant around the conduit entry to prevent moisture from entering the housing.

Mounting the Camera

To mount the camera

1. Route the cables through your chosen conduit entry (see *Feeding the Cables* on page 22).
2. Mount the camera to a wall or ceiling using the supplied mounting screws.

   If you are using screws other than those supplied by Honeywell, remove the rubber washers from the Honeywell-supplied screws and install them under the head of each screw.
3. Apply an appropriate sealant around the mounting screws to prevent moisture from entering the camera enclosure.

Connecting the Cables

Power

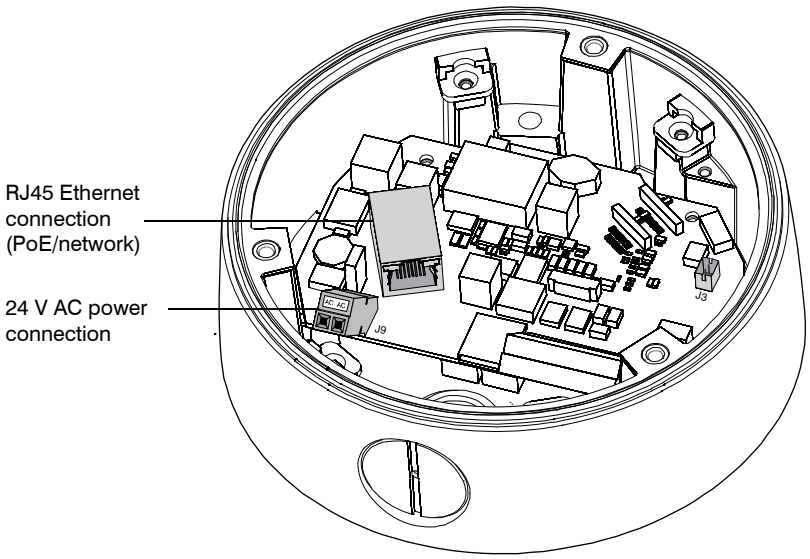
CAUTION **24 V AC models require the use of CSA Certified/UL Listed Class 2 power adapters to ensure compliance with electrical safety standards. Power over Ethernet (PoE) should meet the IEEE 802.3af PoE standard.**

You can use either a 24 V AC source or Power over Ethernet (48 V DC) to power the camera. Do not connect both power sources at the same time. A green light-emitting diode (LED) on the camera interface board illuminates when the camera is receiving power.

To connect the power

- For 24 V AC connection, connect the power wires to the supplied two-pin green connector and plug the connector into the 24 V AC terminal block on the camera interface board (see *Figure 2-4*).
- For PoE connection, connect a Category 5/5e Ethernet cable to the RJ45 jack on the camera interface board (see *Figure 2-4*).

Figure 2-4 Camera Interface Board Connections



Network

To connect to the network

- Connect a Category 5/5e Ethernet cable (10BaseT/100BaseTX) to the RJ45 jack on the camera interface board (see *Figure 2-4*) if you have not already done so.

Adjusting the Camera

You can adjust the camera field of view locally at the camera using a spot monitor.

To adjust the field of view

1. Verify that power is being supplied to the camera (the green LED on the camera interface board should be illuminated).
2. Reinstall the gimbal assembly on the camera base.
3. Using the supplied video cable, connect the local video out connector on the camera interface board to the video input connector on your spot monitor.

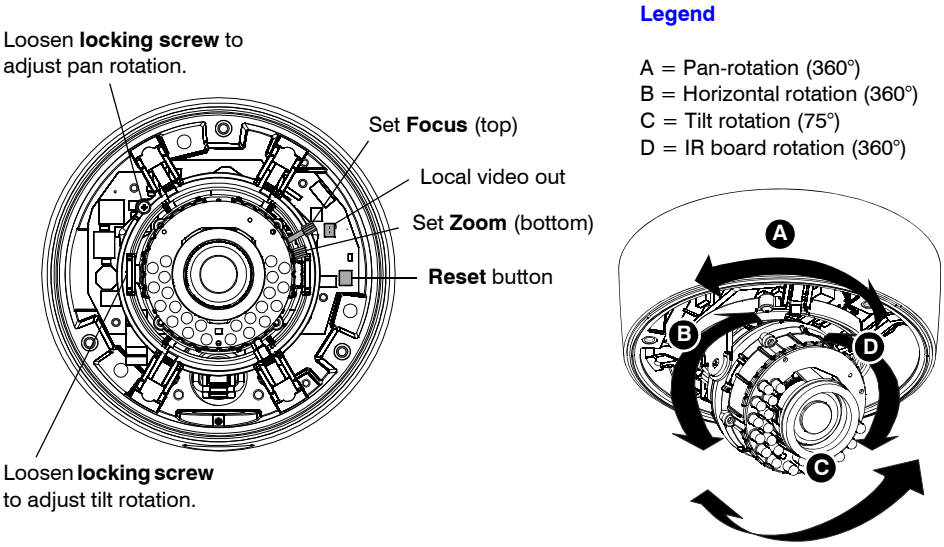
Note It will take approximately 60 seconds after connecting to a power source for video to appear on the spot monitor.

4. Loosen the adjustment screws that lock the gimbal assembly in place to adjust the pan and tilt rotation (see *Figure 2-5*).
5. Adjust the gimbal assembly (pan, tilt, focus, and zoom) to achieve the desired view.

CAUTION **Adjust the camera field of view only by moving the gimbal assembly. Do not move the camera lens to adjust the camera field of view as this might result in irreparable damage.**

Note When aiming the camera, rotate the IR LED board so that the LEDs are not obstructed by the dome cover.

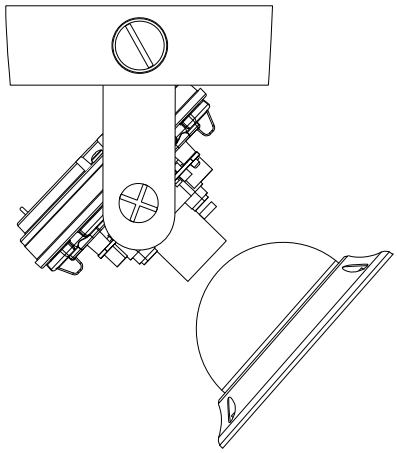
Figure 2-5 Camera Adjustment



6. Retighten the adjustment screws to lock the gimbal assembly in place.

7. If necessary, refocus the lens. Hold the dome cover in front of the lens (see *Figure 2-6*) when adjusting the focus (remove the protective film from the bubble first).

Figure 2-6 Final Focus Adjustment



8. Disconnect the supplied video cable from the local video out connector on the camera interface board.

Restoring Factory Defaults

You can restore the camera options and passwords to their default settings by pressing the reset button located on the camera interface board (see *Figure 2-5*). Use a pin or straightened paper clip to press the reset button and hold for five seconds.

Completing the Installation

1. Replace the dome cover on the camera base and securely tighten the captive screws.
2. Remove the protective film from the bubble if you have not already done so.

3

Installing the Honeywell IP Utility

This chapter describes how to:

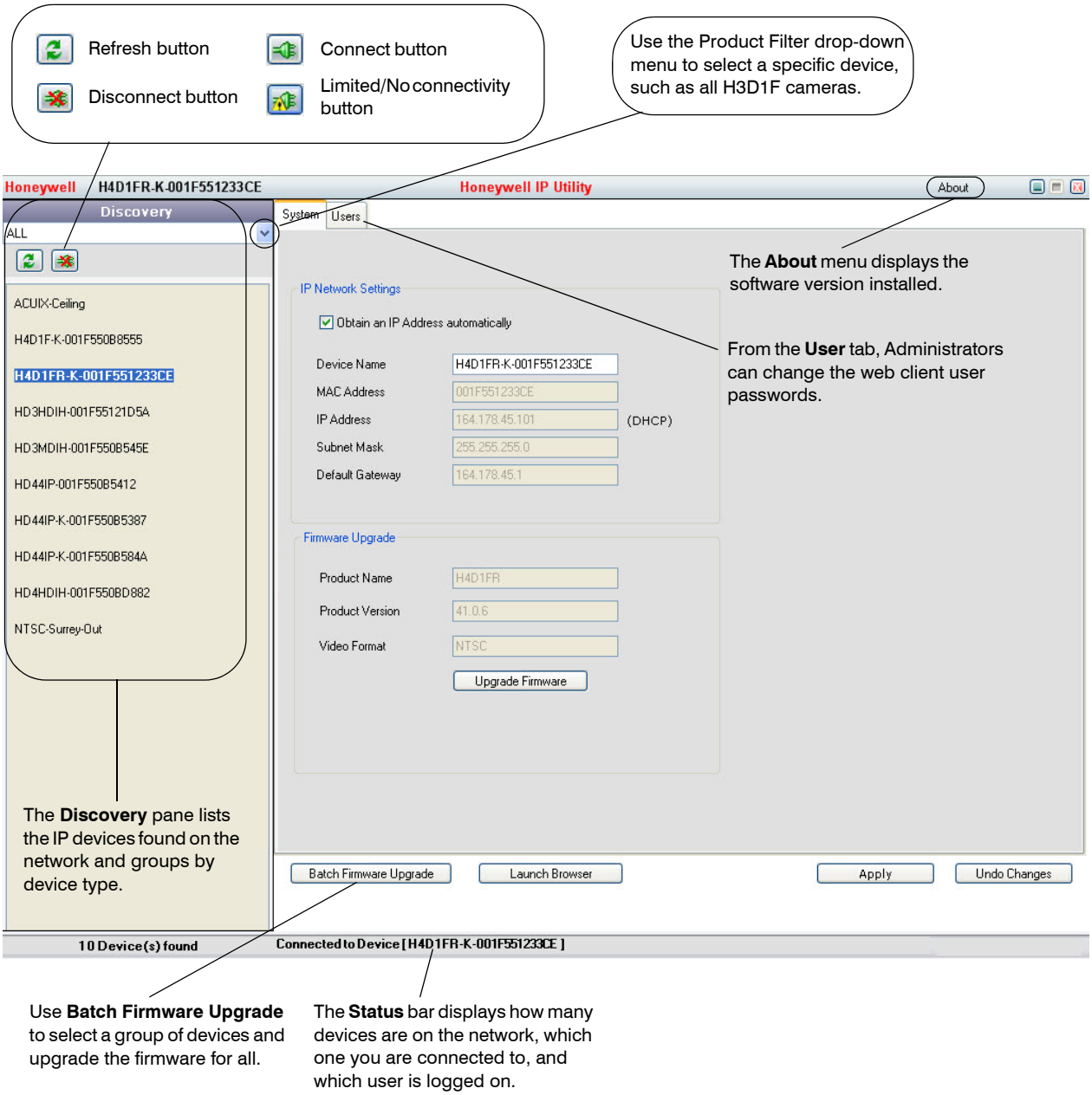
- Install the IP Utility (*page 31*)
- Connect to a H4D1FR1(X) camera (*page 33*)
- Configure the camera's network settings (*page 34*)
- Change the camera's password (*page 36*)
- Uninstall the IP Utility (*page 37*)

About the Honeywell IP Utility

The Honeywell IP Utility is a software application used to discover and configure equIP Series and Performance Series products residing on an IP network. Using the IP Utility, you can change your H4D1FR1(X) camera's network settings (including device name), upgrade the camera's firmware, and manage the camera's user settings. You can also use the utility to launch a web client application in your browser that lets you view live video and access additional camera configuration settings.

For an overview of the Honeywell IP Utility interface, see *Figure 3-1*.

Figure 3-1 Overview of Honeywell IP Utility User Interface



Installing the Honeywell IP Utility

You can install the IP Utility from the DVD that came with your camera or you can download the latest version from Honeywell's Download Center (recommended):

http://www.honeywellsystems.com/support/download-center/index.html

To receive a user name and password for accessing the Download Center, contact the customer service center within your region. This information is provided on the Download Center webpage.

Note If you have an older version of Honeywell IP Utility installed on your computer you may need to uninstall it before you can install the new version. For instructions on how to uninstall the IP Utility, see *Uninstalling the Honeywell IP Utility* on page 37.

Before You Begin

Before you begin installing the IP Utility, do the following:

1. Ensure that your workstation meets the following system requirements:

Operating System	Windows XP Professional, SP3 Windows Server 2003 R2 (32 bit) Windows Vista, SP1 Windows 7 (32/64 bit) Windows Server 2008 R2 (64 bit)
CPU	Pentium 4, 3.1 GHz or faster
System Memory	1 GB (32 bit) or 2 GB (64 bit)

2. Ensure that you have Windows administrator privileges for the workstation on which you are installing the IP Utility.
3. Confirm that your camera is connected to the network (see *Connecting the Cables* on page 24).

Installing the IP Utility

The IP Utility is installed on your workstation using InstallShield. When you install the IP Utility, a networking protocol (Bonjour) is also installed that enables the automatic discovery of IP network devices.

To install the IP Utility

1. Close any open applications. If you are using Norton AntiVirus software, disable it.
2. Do one of the following:

Install from DVD

- Insert the DVD that was shipped with your camera into your workstation's DVD-ROM drive.

  If the InstallShield wizard does not open automatically, browse to [*DVD drive*]\Honeywell_IP_Utility\ and double-click **Honeywell_IP_Utility_Setup.exe**.

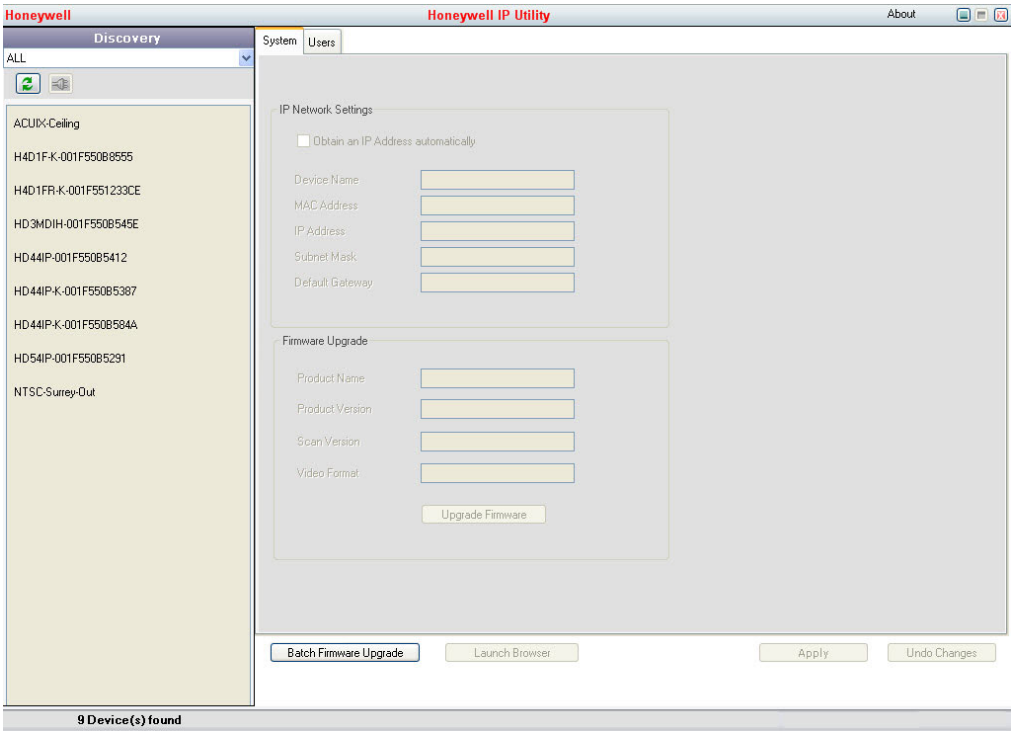
Install from Website

1. Go to www.honeywellsystems.com/support/download-center/index.html.
2. Follow the instructions on the page to log in and find your camera.
3. Run the InstallShield wizard.

4. Follow the InstallShield wizard's on-screen instructions to complete the installation.
5. Open the IP Utility by double-clicking the Honeywell IP Utility icon on the desktop.

   The IP Utility opens on your desktop (see *Figure 3-2*).

Figure 3-2 IP Utility Main Screen



Connecting to a Camera

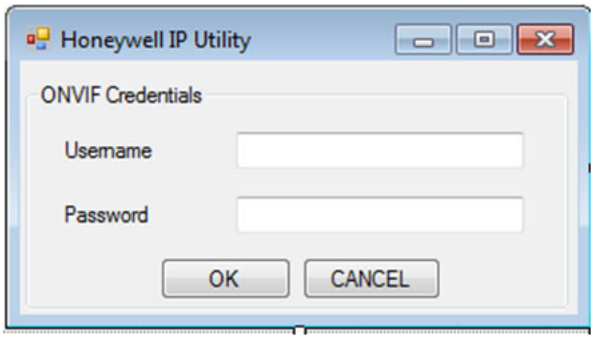
When you open the IP Utility, the devices on the network—including devices on other subnets—are automatically discovered and listed in the **Discovery** pane on the left of the screen. After the initial discovery, the list of discovered devices auto-refreshes at regular intervals. You can manually refresh the list by clicking (Refresh).

To connect to a network camera

- In the **Discovery** pane, double-click the camera you want to connect to. Alternatively, click the camera name, and then click (Connect).

  When connecting to an ONVIF camera for the first time, the ONVIF credentials login window appears (see *Figure 3-3*). Enter your user name and password, and then click **OK**.

Figure 3-3 ONVIF Login Window



If the connection is successful, the message `Connected to Device [device name]` appears in the status bar at the bottom of the screen.

If the connection is unsuccessful, (Limited/No Connectivity) replaces (Connect) in the **Discovery** pane. Check the the network settings of the camera and the workstation. The camera must be on the same subnet as the workstation. Contact your network administrator if you require additional support.

To disconnect from a network camera

- In the **Discovery** pane, click the camera you want to disconnect from, and then click (Disconnect).

  If you try to disconnect without saving configuration details, you will be prompted to save your changes. Click **Yes** to save the changes and disconnect. Click **Cancel** to discard the changes and disconnect.

Configuring the Camera's IP Network Settings

You can configure a connected camera's IP network settings either automatically or manually using the IP Utility. Contact your network administrator if you experience any network-related issues or if you have questions about your network.

Table 3-1 IP Network Settings Options

Option	Description
Device Name	By default, the device name is the device type plus the MAC address. For security purposes it is recommended that you change the device name.
MAC Address	A unique address assigned to the device in the factory. Not configurable.
IP Address	The IP address of the device on the network. The camera can be assigned a static or a dynamic IP address. A static IP address is assigned by the user. A dynamic IP address is assigned automatically by a DHCP or APIPA service.
Subnet Mask	The subnet mask, or netmask, value of the device on the network. IP networks can be subdivided into a series of smaller networks called subnets. When a network is subnetted, the subnet mask specifies which smaller network (subnet) the device belongs to. If the subnet mask is incorrect, the camera cannot communicate with other devices on the network.
Default Gateway	The default gateway address that connects the device to the network. The gateway allows communication between devices on different networks. If the gateway is incorrect, the camera cannot communicate with other devices that are not in the same network address range.

To configure the camera's network settings automatically

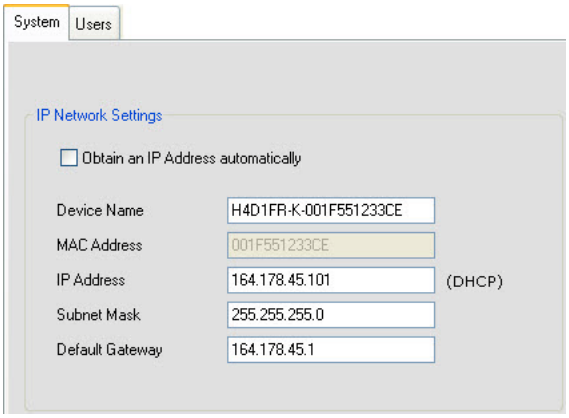
1. Connect to the camera (see *Connecting to a Camera* on page 33).
2. In the **System** tab, under **IP Network Settings**, confirm that the **Obtain an IP address automatically** check box is selected.
3. Enter a descriptive name for the camera in the **Device Name** field. For example, *FrontLobbyDome01*. (By default, the device name is the device type plus the MAC address.)
4. Click **Apply** to save the changes.

   The network automatically assigns the IP address based on the DHCP network server details. If no DHCP server is present on the network, the camera defaults to an APIPA address (*169.254.x.x*).

To configure the camera's network settings manually

1. Connect to the camera (see *Connecting to a Camera* on page 33).
2. In the **System** tab, under **IP Network Settings**, clear the **Obtain an IP Address automatically** check box.

Figure 3-4 IP Network Settings Configuration



3. Enter a descriptive name for the camera in the **Device Name** field. For example, *FrontLobbyDome01*. (By default, the device name is the device type plus the MAC address.)
4. Enter values for the **IP Address**, **Subnet Mask**, and **Default Gateway** (see *Table 3-1*).

   The MAC address is a factory-assigned address and is not configurable.

Note The IP address of the camera must be in the same range as the IP address of the workstation. For example, if the workstation's IP address is *192.168.1.xx*, the camera's IP address should start with *192.168.1* (as in *192.168.1.xy*).

CAUTION Confirm the network settings before clicking Apply**. Incorrect values may prevent the IP Utility from connecting to the device.**

5. Click **Apply** to save the changes.

   The network settings are updated and a message confirming the change appears in the status bar at the bottom of the screen.

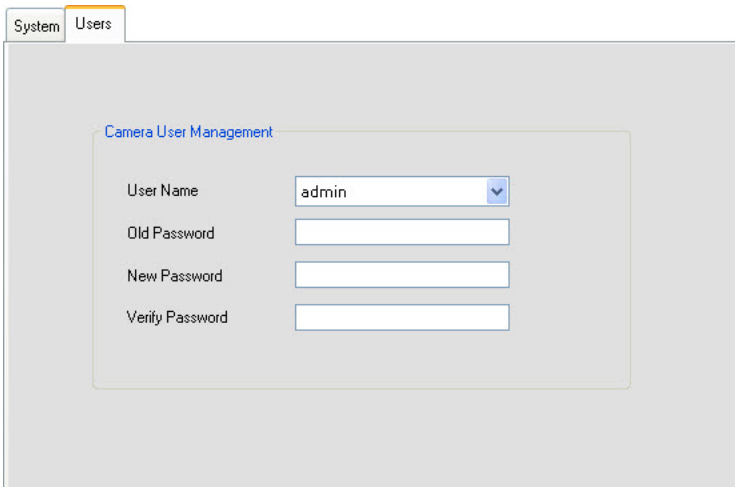
Changing the Camera's Password

You can change a connected camera's administrator (admin) or guest password using the IP Utility.

To change the camera administrator or guest password

1. Connect to the camera (see *Connecting to a Camera* on page 33).
2. Click the **Users** tab.

Figure 3-5 Camera Password Configuration



3. In the **User Name** field, select **admin** or **guest**.
4. In the **Old Password** field, type the old password.
5. In the **New Password** field, type the new password.
6. In the **Verify Password** field, type the new password again.
7. Click **Apply** to save the changes.

Using an ONVIF IP Device with a Network Video Recorder

Your camera features ONVIF support and open API for software integration. Refer to *www.onvif.org* for the ONVIF specification and to the Honeywell Open Technology Alliance website at *www.security.honeywell.com/hota/* to learn more about our open and integrated solutions. There is no support for legacy equIP and equIP2 protocols.

For additional information, refer to the documentation supplied with your NVR or contact your NVR network administrator.

Uninstalling the Honeywell IP Utility

To uninstall the IP Utility in Windows 7

1. Click the **Start** button, click **Control Panel**, click **Programs**, and then click **Programs and Features**.
2. Click **Honeywell IP Utility**, and then click **Uninstall**.

   If you are prompted to confirm that you want to uninstall Honeywell IP Utility, click **Yes**.

To uninstall the IP Utility in Windows XP

1. Click **Start**, click **Control Panel**, and then double-click **Add or Remove Programs**.
2. Click **Honeywell IP Utility**, and then click **Remove**.
3. You are prompted to confirm that you want to uninstall Honeywell IP Utility. Click **Yes**.

4

Setting Up the Camera

This chapter describes how to:

- Start the web client (*page 44*)
- View live video (*page 47*)
- Configure camera setup, including IR settings (*page 48*)
- Configure camera compression settings (*page 48*)
- Configure camera tamper detection and motion detection settings (*page 57*)
- Configure camera date and time settings (*page 64*)
- Reset the camera to factory default settings (*page 70*)
- View camera network settings and firmware details (*page 72*)

About the Web Client

The web client is an Internet-based application that enables administrators to monitor live video and make adjustments to the camera setup.

Guest users can monitor live video but cannot access the setup functionality of the web client.

The camera's default user names and passwords are listed in *Table 4-1*. To change the administrator or guest password, see *Changing the Camera's Password* on page 36.

Table 4-1 Default Camera User Names and Passwords

Login Profile	User Name	Password
Administrator	admin	1234
Guest	guest	guest

Before You Begin

You must have Windows administrator privileges and your workstation must meet the following minimum requirements to run the web client application.

Operating System	Windows XP Professional, SP3 Windows Server 2003 R2 (32 bit) Windows Vista, SP1 Windows 7 (32/64 bit) Windows Server 2008 R2 (64 bit)
CPU	Pentium 4, 3.1 GHz or faster
System Memory	1 GB (32 bit) or 2 GB (64 bit)
Graphics Card	Display driver with Direct3D enabled (for Internet Explorer only)
Web Browser	Microsoft Internet Explorer 8 or 9 (32 bit) Google Chrome v23.0.1271.97 or later (32 bit) Mozilla Firefox v17.01 or later

Preparing for ActiveX Installation (Internet Explorer Only)

Configuring Windows 7 (32 bit/64 bit) and IE Security Settings

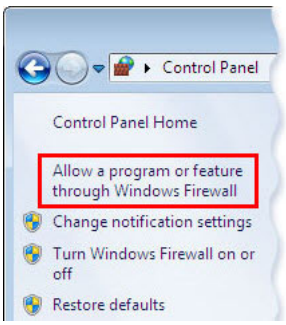
Note Make sure your Windows user account has administrator privileges.

Configure Windows Firewall

1. Click **Start** ➤ **Control Panel** ➤ **System and Security** ➤ **Windows Firewall Settings**.

   The Windows Firewall Settings page opens.

   Figure 4-1 Windows Firewall Settings


Control Panel
Control Panel Home
Allow a program or feature through Windows Firewall
Change notification settings
Turn Windows Firewall on or off
Restore defaults

2. Click **Allow a program or feature through Windows Firewall**.

   The **Allowed Programs** list appears.

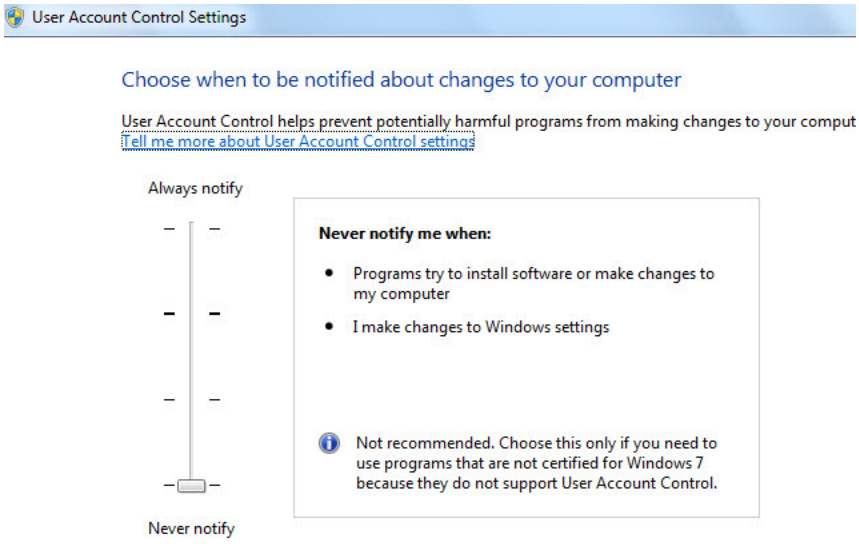
3. Do one of the following:
   - If Internet Explorer is already in the **Allowed** list, then select all the check boxes (Domain, Home/Work, Public, Group Policy).
   - If Internet Explorer is not already in the **Allowed** list, click **Allow another program**, browse for **iexplore**, and then click **Open**. Once in the Allowed list, select all the check boxes (Domain, Home/Work, Public, Group Policy).

Configure User Account Control (UAC) Settings

1. Click **Start** ➤ **Control Panel**.
2. In the **Search Control Panel**, type **UAC**.
3. Click **Change User Account Control settings**.

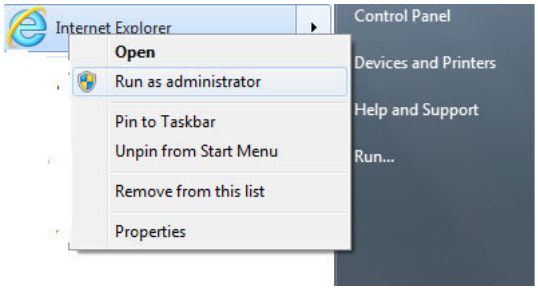
   The User Account Control Settings page appears.

Figure 4-2 Preferred UAC Settings


User Account Control Settings
Choose when to be notified about changes to your computer
User Account Control helps prevent potentially harmful programs from making changes to your comput
Tell me more about User Account Control settings
Always notify
Never notify
Never notify me when:
Programs try to install software or make changes to my computer
I make changes to Windows settings
Not recommended. Choose this only if you need to use programs that are not certified for Windows 7 because they do not support User Account Control.

If the UAC level is not configured to the lowest level, then please run Internet Explorer as administrator. Click **Start**, right-click **Internet Explorer**, and then click **Run as administrator**.

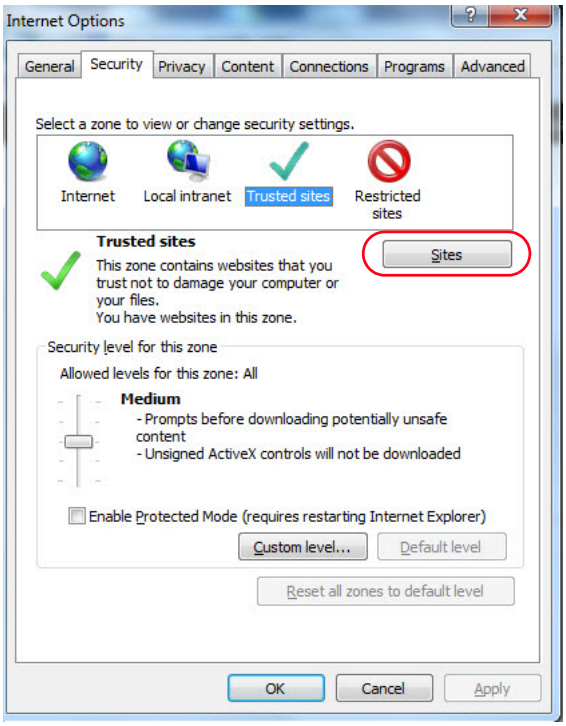
Figure 4-3 Run IE as Administrator



Add Camera URL to Trusted Sites in Internet Explorer

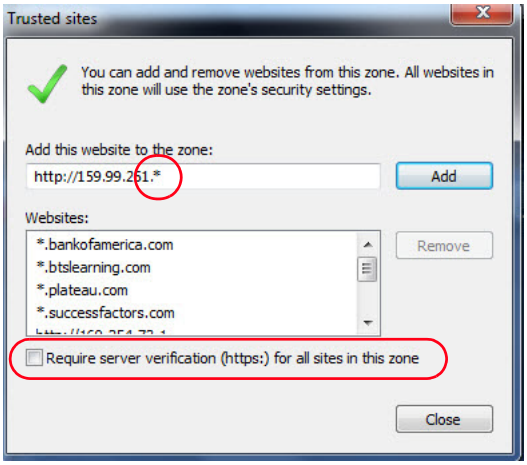
1. Open the Honeywell IP Utility.
2. Connect to your camera.
3. Click **Launch Browser** to open the camera login page.
4. In the browser, click **Tools** ➤ **Internet Options** ➤ **Security** ➤ **Trusted Sites**.

Figure 4-4 Trusted Sites Configuration Page



5. Click **Sites**. The **Trusted Sites** window opens.
6. Clear the **Require server verification (https:) for all sites in the zone** check box.
7. Do one of the following:
   - To add one camera to the **Trusted Sites** list, enter the URL in the **Add this website to the zone:** field.
   - To add a whole subnet to the **Trusted Sites** list, enter the partial URL with a * at the end in the **Add this website to the zone:** field. Use a * to add the whole network.

Figure 4-5 Adding a Subnet to Trusted Sites



8. Click **Add** to add the website to the list of trusted websites, and then click **Close**.

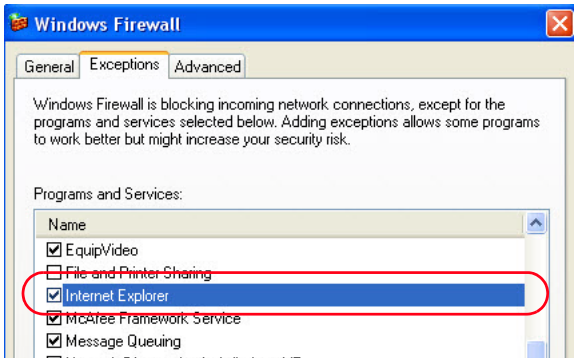
Configuring Windows XP SP3 and IE Security Settings

Note Make sure your Windows user account has administrator privileges.

Configure Windows Firewall

1. Click **Start**, click **Control Panel**, and then double-click **Windows Firewall**.
2. Click the **Exceptions** tab.
3. If the firewall is on, configure it to allow IE through the firewall, and then click **OK** to save the changes.

Figure 4-6 Allowing IE through the Firewall


Windows Firewall
General
Exceptions
Advanced
Windows Firewall is blocking incoming network connections, except for the programs and services selected below. Adding exceptions allows some programs to work better but might increase your security risk.
Programs and Services:
Name
EquipVideo
File and Printer Sharing
Internet Explorer
McAfee Framework Service
Message Queuing

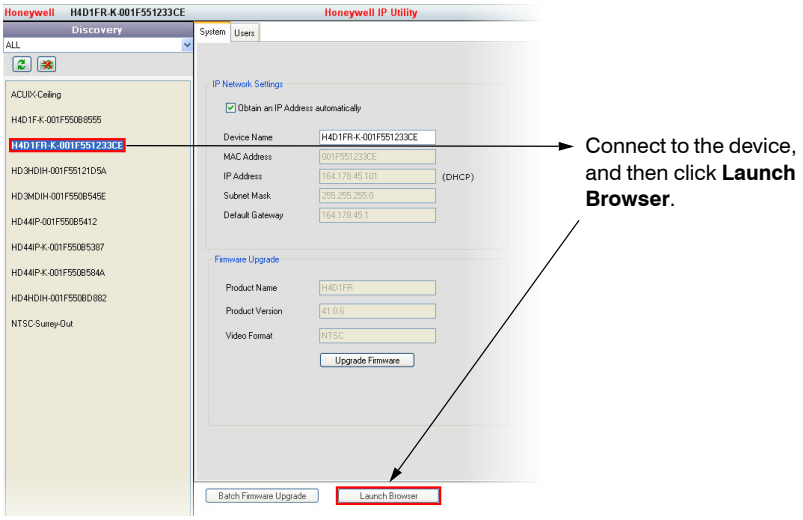
Add Camera URL to Trusted Sites in Internet Explorer

See *Add Camera URL to Trusted Sites in Internet Explorer* on page 42.

Starting the Web Client

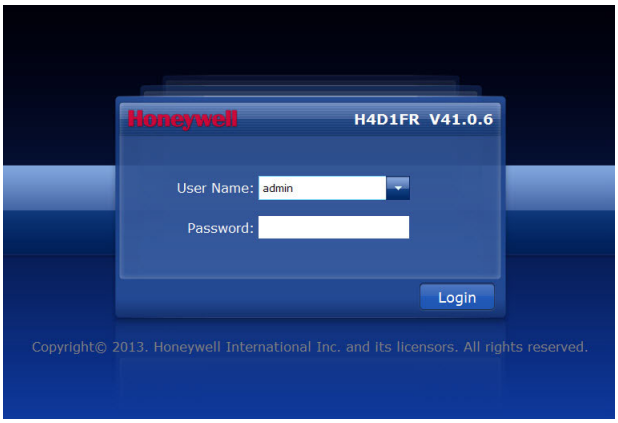
To start the web client in Internet Explorer

1. Open the Honeywell IP Utility.
2. Connect to your camera.
3. Click **Launch Browser**.



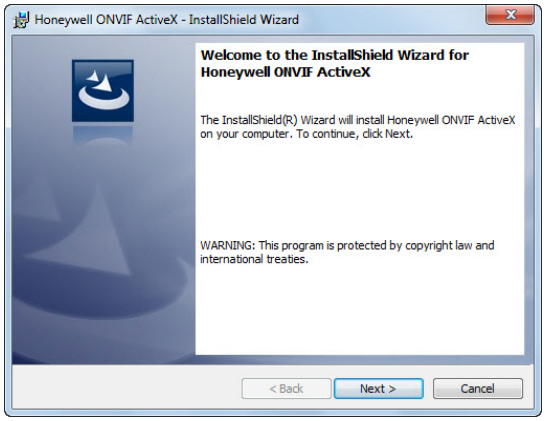
Alternatively, you can enter the IP address of the camera directly into the address bar of the browser.

The login window is displayed.



4. In the **Username** field, select **admin**.
5. In the **Password** field, type the default admin login password **1234**, and then click **Login**.

The first time you open the web client you will be prompted to install Honeywell ONVIF ActiveX® on your computer.


Honeywell ONVIF ActiveX - InstallShield Wizard
Welcome to the InstallShield Wizard for Honeywell ONVIF ActiveX
The InstallShield(R) Wizard will install Honeywell ONVIF ActiveX on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

If a previous version of Honeywell ActiveX is installed, you will be prompted to upgrade. Follow the on-screen instructions to install the ActiveX control.

Note You may need to disable your firewall to install Honeywell ONVIF ActiveX on your computer. You will need Windows administrator privileges to do this.

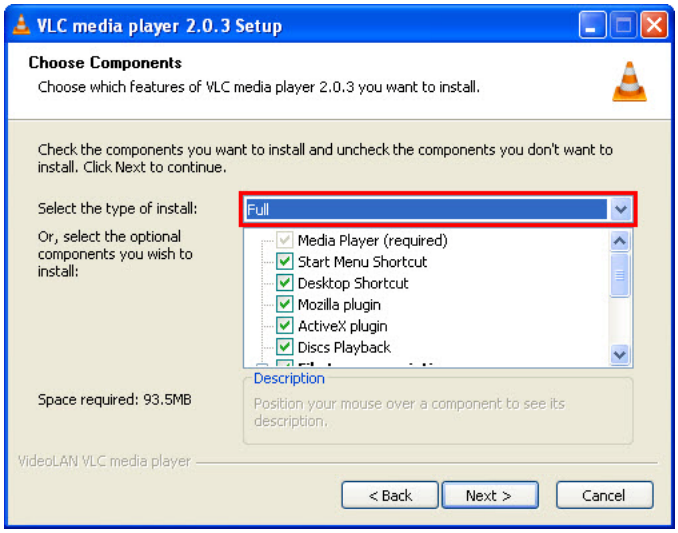
The web client application opens and live video is displayed in your browser.

To start the web client in Chrome or Firefox

1. Install VLC media player from the installation DVD that was shipped with your camera.

Note It is strongly recommended that you install VLC media player from the supplied installation DVD rather than from the Web.

2. Follow the on-screen instructions to install the VLC player. Select **Full** installation.


VLC media player 2.0.3 Setup
Choose Components
Choose which features of VLC media player 2.0.3 you want to install.
Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.
Select the type of install:
Full
Or, select the optional components you wish to install:
Media Player (required)
Start Menu Shortcut
Desktop Shortcut
Mozilla plugin
ActiveX plugin
Discs Playback
Description
Position your mouse over a component to see its description.
Space required: 93.5MB
VideoLAN VLC media player
< Back
Next >
Cancel

3. Open your browser.

Note You may need to restart Firefox after installing VLC media player.

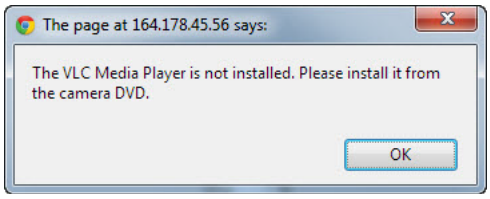
4. Type the IP address of the camera (listed in the IP Utility) in the address bar of the browser, and then press Enter.

   The login window is displayed.

5. In the **Username** field, select **admin**.
6. In the **Password** field, type the default admin login password **1234**, and then click **Login**.

   The web client application opens and live video is displayed in your browser.

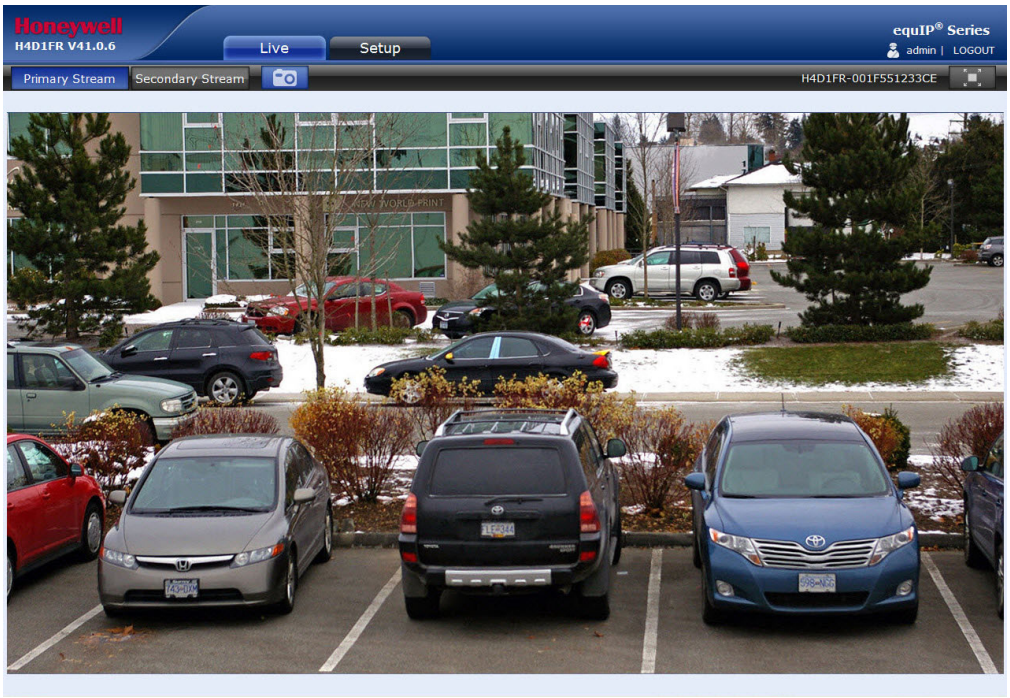
   If VLC media player is not installed, the following warning message will appear:



Viewing Live Video

Live view (*Figure 4-7*) displays live real-time video from the selected camera.

Figure 4-7 Live View



Taking a Snapshot

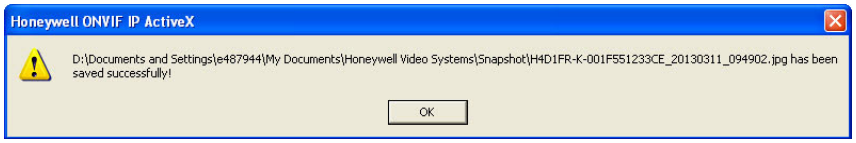
The Snapshot function lets you save an image from Live view to a default folder on your computer (for example, C:\Documents and Settings\User\My Documents\Honeywell Video Systems\Snapshot). Files are saved as: *DeviceName_Date_Time*.jpg.

The Snapshot function is available to both administrators and guests.

To take a snapshot in Microsoft Internet Explorer 8 and 9

- Click the **Snapshot** button .

  A message appears confirming that the snapshot was saved successfully.


Honeywell ONVIF IP ActiveX
D:\Documents and Settings\e487944\My Documents\Honeywell Video Systems\Snapshot\H4D1FR-K-001F551233CE_20130311_094902.jpg has been saved successfully!
OK

Note To configure the settings for Snapshot, including the file type and save path, see *System Setup* on page 70.

To take a snapshot in Google Chrome and Mozilla Firefox

1. Click the **Snapshot** button .

   A window opens displaying the snapshot (your browser must be configured to allow pop-ups).

Chrome

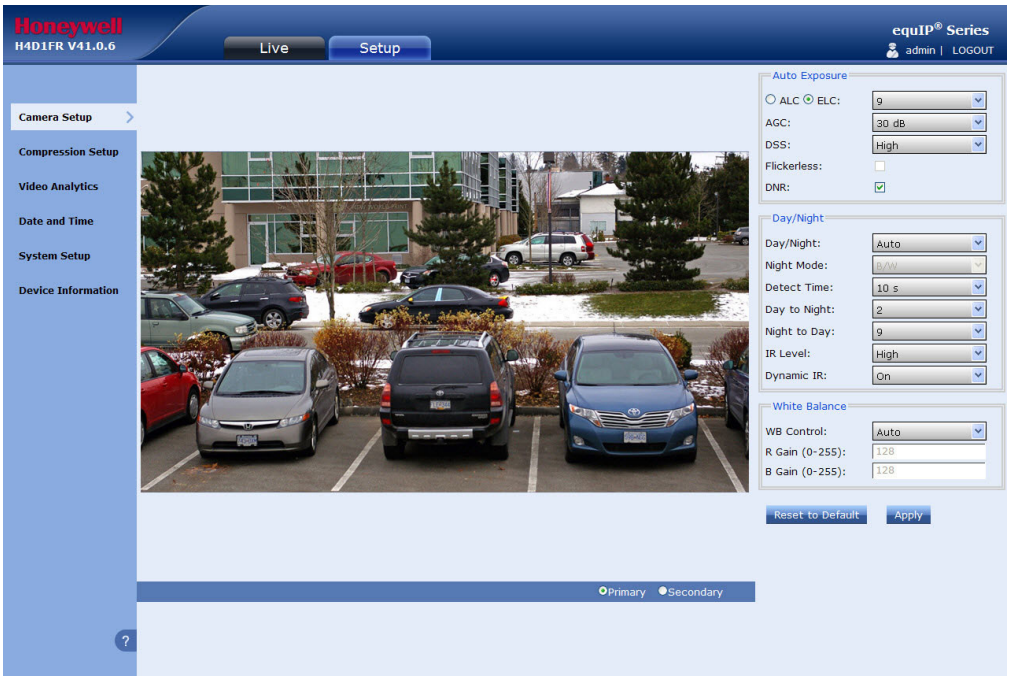
Firefox

2. Right-click the window, and then click **Save Image As**.
3. In the **Save Picture** dialog box, browse to the folder where you want to save the file, enter a file name, and then click **Save**.

Configuring Camera Settings

The Camera Setup view (*Figure 4-8*) lets you configure auto exposure, day/night operation, and white balance for both primary and secondary video streams.

Figure 4-8 Camera Setup View



Basic Camera Setup Process

1. Aim and focus the camera locally (see *Adjusting the Camera* on page 25).
2. Create a typical scene. Add the motion, scene complexity, and lighting levels (day or night) expected in normal operation.
3. Log in to the web client, and then click **Setup**.
4. Click **Camera Setup**, and then adjust the image parameters under **Auto Exposure**, **Day**/**Night**, and **White Balance** to achieve the desired exposure and white balance.
5. Click **Compression Setup**, and then select the **Statistics** check box at the bottom of the screen (available in Internet Explorer only).
6. In **Compression Setup**, under **Primary**, set the resolution, frame rate, and priority mode (**Quality**, **Bit Rate**, or **Frame Rate**).
7. Is the delivered picture quality, bit rate, and frame rate acceptable with the appropriate motion, scene complexity, and day/night transitions?
   - Yes - Camera setup is complete.
   - No - Additional configuration is required (see below).

If the delivered bit rate is close to the maximum bit rate, can you increase the maximum bit rate value?	Yes - Increase the maximum bit rate.	No - Set the compression ratio to **High** or **Maximum**.
Can you increase the target bit rate value?	Yes - Increase the target bit rate.	No - Reduce the resolution and/ or frame rate.

Setting Auto Exposure

To configure **Auto Exposure** settings, see *Table 4-2*. Click **Apply** to save your changes.

Table 4-2 Auto Exposure Settings

Setting	Options	Description
ALC (Automatic Light Compensation)	Level 1–25	The shutter speed is constant and brightness is controlled through the lens iris by opening and closing it. Adjust the ALC level so that the image is correctly exposed (neither too bright nor too dark). Recommended for indoor scenes, especially under fluorescent light.
ELC (Electronic Light Compensation)	Level 1–25	The lens iris is fully open at all times and brightness is achieved by controlling the electronic shutter. Adjust the ELC level to attain the desired scene brightness. Recommended for outdoor scenes.
AGC (Automatic Gain Control)	Off, 20 dB, 30 dB, 40 dB	Default is 30 dB. Increase the gain setting to increase the scene brightness. **Note** As AGC levels are reduced, the threshold ranges for Day-to-Night and Night-to-Day are decreased.
DSS (Digital Slow Shutter)	Disable, Low, High	Automatically provides a clear image under low-light conditions by increasing scene brightness. However, motion blur may result. The higher the setting, the likelier motion blur will occur.
Flickerless	[Enabled], [Disabled]	Eliminates flickering caused by certain lighting conditions (such as fluorescent lighting). **Note** **Flickerless** is unavailable when **ELC** is selected.
DNR (Digital Noise Reduction)	[Enabled], [Disabled]	DNR improves the picture quality in low light by reducing video noise. **Note** **DNR** is unavailable when **AGC** is set to **Off**.

Setting Day/Night and IR

To configure **Day**/**Night** settings, see *Table 4-3*. Click **Apply** to save your changes.

Table 4-3 Day/Night Settings

Setting	Options	Description
Day/**Night**	Auto, Day, Night	Controls true day/night (TDN) operation. When **Auto** is selected, the IR cut filter is removed automatically in low-light scenes. When **Day** is selected, the IR cut filter is on at all times. When **Night** is selected, the IR cut filter is off (removed) at all times.
Night Mode	B/W, Color	Sets the color mode to **B**/**W** (monochrome) or **Color** when in **Night** mode. **Day**/**Night** must be set to **Night**.
Detect Time	5–60 seconds	Sets the time (**5** to **60** seconds) before the camera switches to **Day** or **Night** mode after detecting a low-light condition or a normal light condition, respectively. **Day**/**Night** must be set to **Auto**.
Day to Night	2–7	Determines the light detection level when the camera switches to **Night** mode. The lower the value, the darker the lighting conditions before the camera switches. **Day**/**Night** must be set to **Auto**. **Note** The **Day to Night** threshold must be set at least 2 less than the **Night to Day** threshold setting. **Note** The **Day to Night** threshold is decreased if the **AGC** level is reduced.
Night to Day	4–9	Determines the light detection level when the camera switches to **Day** mode. The higher the value, the brighter the lighting conditions before the camera switches. **Day**/**Night** must be set to **Auto**. **Note** The **Night to Day** threshold is decreased if the **AGC** level is reduced.
IR Level	Off, Low, Medium, High	Controls IR LED intensity. Select setting based on desired scene illumination. **Note** **IR Level** is unavailable when **Day**/**Night** is set to **Day**.
Dynamic IR	Off, On	Controls overexposure. When set to **On**, the camera automatically adjusts to minimize overexposure occurring from reflective objects in the scene. **Note** **Dynamic IR** is unavailable when **IR Level** is set to **Off**.

Setting White Balance

To configure **White Balance** settings, see *Table 4-4*. Click **Apply** to save your changes.

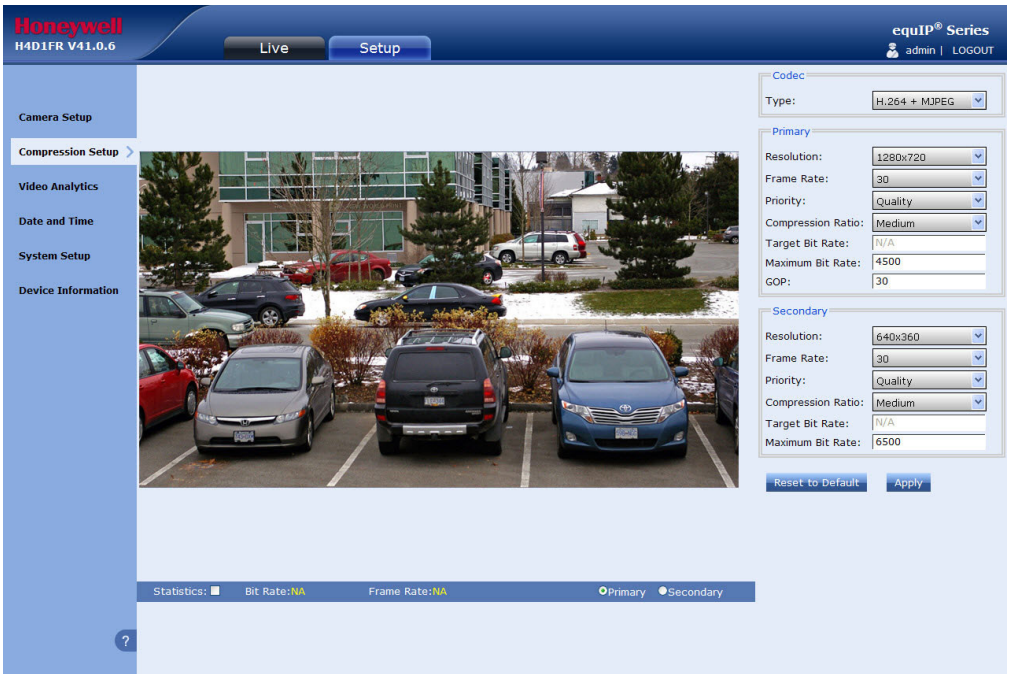
Table 4-4 White Balance Settings

Setting	Options	Description
WB Control	Auto, Manual, WBC Push	**Auto** adjusts white balance automatically. Recommended for environments with changing lighting conditions. **Manual** allows user to set red and blue gain manually. **WBC Push** optimizes white balance for a given scene. Click **Lock** to lock the setting. Recommended for environments with constant lighting conditions.
R Gain (0–255)	0–255	When WB Control is set to **Manual**, red gain is selectable from 0 to 255.
B Gain (0–255)	0–255	When WB Control is set to **Manual**, blue gain is selectable from 0 to 255.

Configuring Compression Settings

The Compression Setup view (*Figure 4-9*) lets you configure the way video is displayed in the web client.

Figure 4-9 Compression Setup View



The camera supports two simultaneous video streams. The primary stream delivers H.264-compressed video.The secondary stream delivers either H.264 or MJPEG-compressed video (see *Table 4-5*).

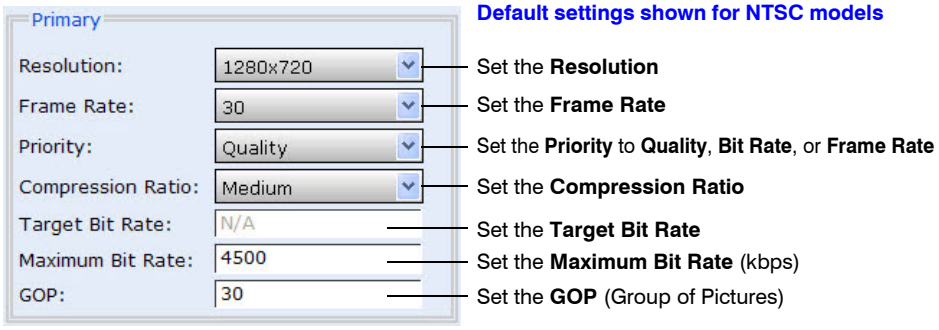
Table 4-5 Video Stream Configurations

Codec Type	Description
H.264	H.264 compression used for primary stream; no secondary stream
H.264 + H.264	H.264 compression used for primary and secondary stream
H.264 + MJPEG	H.264 compression used for primary stream and MJPEG compression used for secondary stream

You can configure the settings for the primary stream (*Figure 4-11*) and/or the secondary stream (*Figure 4-12*) based on the codec type you select (*Figure 4-10*).

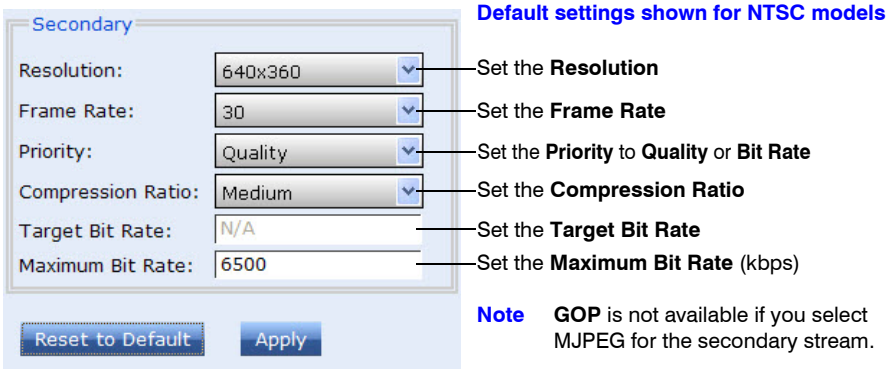
Figure 4-10 Codec Type

Figure 4-11 Primary Stream Settings (H.264)



Note To configure the secondary stream, either **H.264 + H.264** or **H.264 + MJPEG** must be selected as the codec type.

Figure 4-12 Secondary Stream Settings (H.264 or MJPEG)



To configure the **Primary** and/or **Secondary** stream compression settings, see *Table 4-6*. Click **Apply** to save your changes.

Note *Internet Explorer users only:* Select the **Statistics** check box at the bottom of the screen to view the received bit rate and received frame rate as you make changes. Please note that the **Statistics** check box is disabled by default. To view the received bit rate and frame rate, you must enable it each time you log on to the web client.

Table 4-6 Compression Settings

Setting	Options		Description
Resolution	**Primary** 1280×720 800×450 640×360 320×180	**Secondary** 1280×720 (H.264) 800×450 (H.264) 640×360 (H.264) 320×180 (H.264) 640×360 (MJPEG) 320×180 (MJPEG)	Sets the picture resolution.
Frame Rate	1–30 (NTSC) 1–25 (PAL)		The number of frames displayed per second.
Priority	**Primary** Quality, Bit Rate, Frame Rate	**Secondary** Quality, Bit Rate	Sets whether picture quality, bit rate, or frame rate has operational priority. For more information, see *Configuring Priority Settings* on page 55.
Compression Ratio	Minimum, Low, Medium, High, Maximum		Available when **Priority** is set to **Quality**. **Minimum** provides the highest picture quality. **Maximum** provides the lowest picture quality.
Target Bit Rate	250–7000 kbps		Available when **Priority** is set to **Bit Rate** or **Frame Rate**. For more information, see *Configuring Priority Settings* on page 55.
Maximum Bit Rate	250–7000 kbps		Available when **Priority** is set to **Quality**. For more information, see *Configuring Priority Settings* on page 55.
GOP	1–50		Group of pictures. Not available on MJPEG secondary stream.

Configuring Priority Settings

Your camera uses efficient compression technology to provide a high quality picture using minimal bandwidth. The default settings are based on typical user requirements and are adequate for most scenes. However, scenes with higher than average motion may require additional configuration.

About Priority Settings

For the primary stream, you can prioritize the picture quality, bit rate, or frame rate. For the secondary stream, you can prioritize the picture quality or bit rate. These settings are described in *Table 4-7*.

Table 4-7 Priority Settings

Priority	Bit Rate Type	Description
Quality	Maximum Bit Rate	The camera maintains the picture quality until the delivered bit rate exceeds the **Maximum Bit Rate**, at which point the camera begins to drop frames.
Bit Rate	Target Bit Rate	The camera adjusts the picture quality to achieve the **Target Bit Rate**.
Frame Rate	Target Bit Rate	The camera maintains the selected frame rate while adjusting the picture quality to meet the **Target Bit Rate**.

The range of user-definable bit rate values is dependent on the video stream, codec type, and resolution (see *Table 4-8*).

Table 4-8 Range of User-Definable Bit Rate Values

Stream	Codec	Resolution	Range
Primary	H.264	1280×720 800×450 640×360 320×180	Between 1000 and 6000 kbps Between 500 and 3000 kbps Between 500 and 3000 kbps Between 250 and 1500 kbps
Secondary	H.264	1280×720 800×450 640×360 320×180	Between 1000 and 6000 kbps Between 500 and 3000 kbps Between 500 and 3000 kbps Between 250 and 1500 kbps
	MJPEG	640×360 320×180	Between 1000 and 7000 kbps Between 500 and 3500 kbps

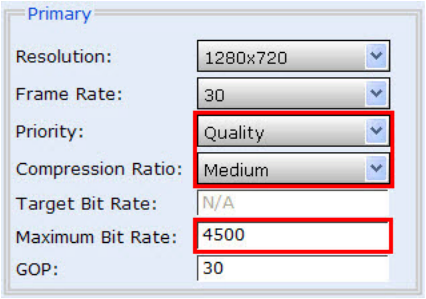
Setting Quality as Priority

To set picture quality as the priority

1. Next to **Priority**, select **Quality**.
2. Next to **Compression Ratio**, select **Minimum**, **Low**, **Medium**, **High**, or **Maximum**.

   The default setting is **Medium**. Selecting **Minimum** or **Low** will increase the overall picture quality and increase the delivered bit rate.
3. Next to **Maximum Bit Rate**, enter a value between 250 and 7000 kbps (see *Table 4-8*).

   If the delivered bit rate exceeds this value, the frame rate will drop.



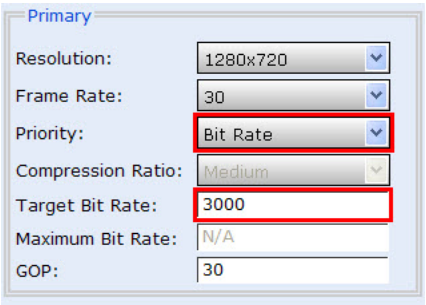
Setting Bit Rate as Priority

To set bit rate as the priority

1. Next to **Priority**, select **Bit Rate**.
2. Next to **Target Bit Rate**, enter a value between 250 and 7000 kbps (see *Table 4-8*).

   Increasing or decreasing the target bit rate threshold will increase or decrease the picture quality accordingly.

   If the delivered bit rate exceeds this value, the frame rate will drop.



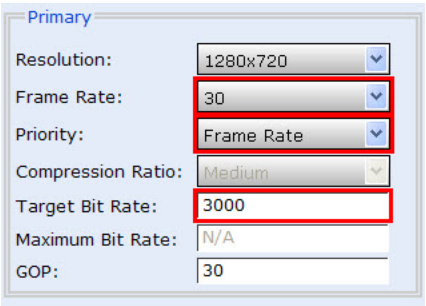
Setting Frame Rate as Priority (Primary Stream Only)

To set frame rate as the priority

1. Next to **Frame Rate**, select the frame rate that you want to maintain.
2. Next to **Priority**, select **Frame Rate**.
3. Next to **Target Bit Rate**, enter a value between 250 and 7000 kbps (see *Table 4-8*).

   Increasing or decreasing the target bit rate threshold will increase or decrease the picture quality accordingly.

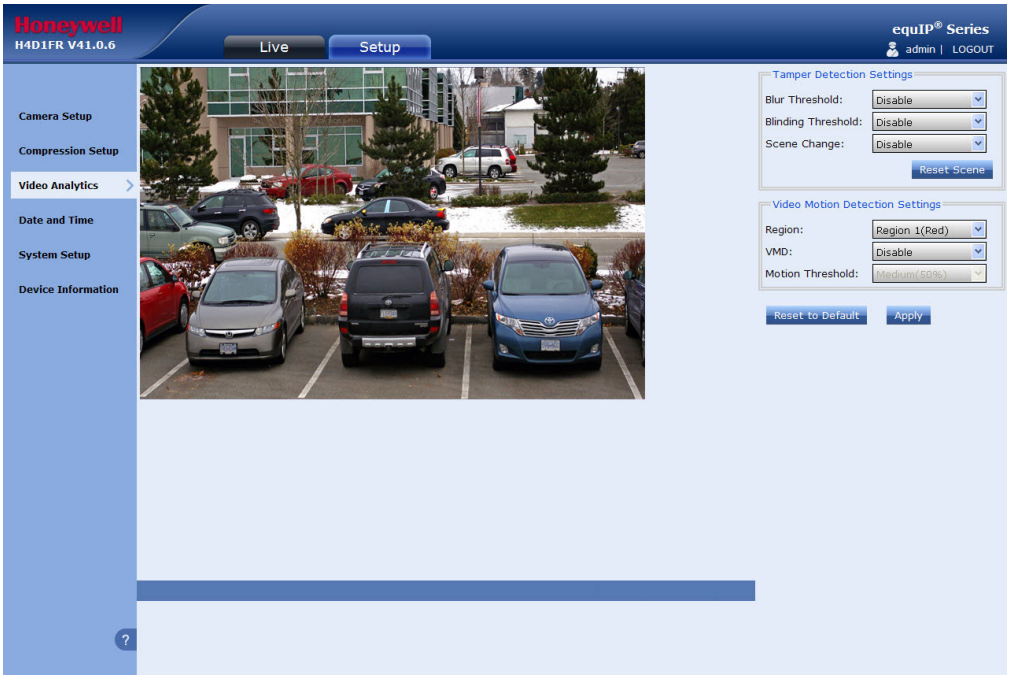
   This priority allows the actual bit rate to fluctuate beyond the target bit rate while maintaining the selected frame rate.



Configuring Video Analytics

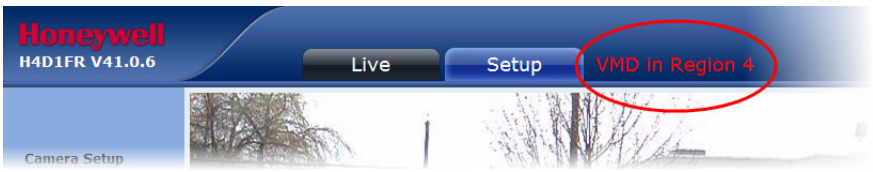
The Video Analytics view (*Figure 4-13*) lets you configure the camera's tamper detection and video motion detection settings.

Figure 4-13 Video Analytics View



Each setting has three threshold levels: high (80%), medium (50%), and low (30%). When these thresholds are exceeded, camera sabotage or motion is detected and an alarm message appears above the video display (*Figure 4-14*).

Figure 4-14 Video Analytics Alarm Message

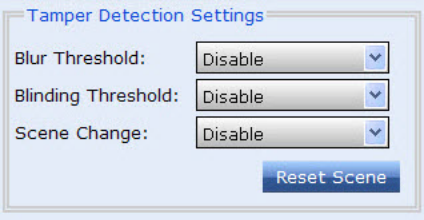


Note The Video Analytics screen shows a static video snapshot instead of live video. For this reason, you should open a second web client window for monitoring live video.

Setting Tamper Detection

The tamper detection settings alert the web client user to possible camera sabotage when the following occurs:

- The camera video is blurred.
- The camera is blinded.
- The camera field of view has changed.



To avoid false alarms, tamper detection should be manually disabled when:

- The video display is being configured.
- Text is overlaid on the video.
- The video display becomes too dark.

Blur Threshold

The video blurring may occur when the camera is exposed to rain or other elements or when the lens focus is set incorrectly.

To set the blur threshold

1. Next to **Blur Threshold**, select one of the following options:

   - **High (80%)** Maximum blurring detection. The alarm message appears when the video is blurred by 80% or more.
   - **Medium (50%)** Medium blurring detection. The alarm message appears when the video is blurred by 50% or more.
   - **Low (30%)** Minimum blurring detection. The alarm message appears when the video is blurred by 30% or more.
   - **Disable (Default)** Disables video blur detection.

2. Click **Apply** to save the settings.

Blinding Threshold

Camera blinding occurs when an obstacle is placed in front of the camera lens.

To set the blinding threshold

1. Next to **Blinding Threshold**, select one of the following options:

   - **High (80%)** Maximum blinding detection. The alarm message appears when the camera lens is blinded by 80% or more.
   - **Medium (50%)** Medium blinding detection. The alarm message appears when the camera lens is blinded by 50% or more.
   - **Low (30%)** Minimum blinding detection. The alarm message appears when the camera lens is blinded by 30% or more.
   - **Disable (Default)** Disables camera blinding detection.

2. Click **Apply** to save the settings.

Scene Change

Scene change detection works best detecting objects with distinct edges and corners. Scenes that appear flat or monochrome may trigger false alarms.

To set the scene change threshold

1. Click **Reset Scene**.
2. Next to **Scene Change**, select one of the following options:

   - **High (80%)** Maximum scene change detection. The alarm message appears when the field of view changes by 80% or more.
   - **Medium (50%)** Medium scene change detection. The alarm message appears when the field of view changes by 50% or more.
   - **Low (30%)** Minimum scene change detection. The alarm message appears when the field of view changes by 30% or more.
   - **Disable (Default)** Disables scene change detection.

3. Click **Apply** to save the settings.

Setting Video Motion Detection (VMD)

An Administrator can enable and configure up to five zones to be monitored for motion in a scene.

Note The video analytics screen shows a static video snapshot instead of live video. For this reason, you should open a second web client window for monitoring live video.

Best Practices for Configuring Video Motion Detection

For best results configuring video motion detection, follow these steps:

1. Identify areas in the image where motion detection alarms should be triggered.

   In some applications, motion anywhere in the image needs to be reported. In other applications, users will only want to monitor specific areas such as doors, stairwells, or other areas of interest.

2. Select one of the five available regions for each area of interest, and draw the box so that it fully covers the area of interest.

Note The camera only measures motion inside the drawn region-of-interest box. So a person or vehicle moving along the boundary of the box may or may not trigger an alarm, because their motion will only be evaluated partially. It is therefore important to adjust the region-of-interest boxes to fully cover the areas of interest.

In cameras with a wide field of view, or where activity happens far away from the camera, people and vehicles might appear rather small in the image and it might not be possible to apply a single area of interest to the whole field of view and reliably detect motion. In such cases, it is recommended that several smaller region-of-interest boxes be applied to areas where motion alarms are of most interest to the user such as entrances, restricted access areas, and so on.

3. Use the medium sensitivity at 50% as the initial setting. This setting can be changed later as needed (see *Adjusting Video Motion Detection Sensitivity* on page 61).
4. Observe VMD performance in all expected lighting conditions after the initial configuration is applied. Ensure that relevant scene motion does trigger alarms and ensure that the camera is not reporting false alarms (such as VMD alarms triggered due to image noise).

Setting Video Motion Detection

To set video motion detection (VMD)

1. Next to **Region**, select one of the following:
   - **Region 1 (Red)**
   - **Region 2 (Green)**
   - **Region 3 (Blue)**
   - **Region 4 (Magenta)**
   - **Region 5 (Cyan)**
2. Next to **VMD**, select **Enable**.

   A box corresponding to the region you selected in step 1 appears on the video display in its default location.
3. If you want, you can move and resize the box.
   a. To move the box, click inside the box and drag it to a new location on the screen.
   b. To resize the box, hover your mouse over one of the sides of the box until the mouse pointer becomes a double-headed arrow. then drag the side to its new position.
4. Next to **Motion Threshold**, select one of the following options:
   - **High (80%)** Least sensitive to motion
   - **Medium (50%)** Medium sensitivity to motion (recommended for initial setting)
   - **Low (30%)** Most sensitive to motion
5. Click **Apply**.
6. Repeat steps 1 to 5 to configure additional regions if desired.
7. To confirm that the VMD settings have been applied, go to another screen (such as Camera Setup) and then return to the Video Analytics screen. Check that the VMD settings have not changed.

Note To disable a region that you have configured, next to **Region**, click the region that you want to disable, and then, next to **VMD**, select **Disable**.

Adjusting Video Motion Detection Sensitivity

Increasing Sensitivity

If relevant scene motion does not trigger VMD alarms, do the following:

- Decrease the **Motion Threshold** level (from 80% to 50%, or from 50% to 30%). This will increase the sensitivity of the motion detection, causing smaller objects to be detected and decrease the contrast level (amount of noise) required to trigger an alarm. This should be the primary adjustment mechanism.
- Decrease the size of the region-of-interest box (and add more regions if needed). This will cause smaller objects to be detected and trigger VMD alarms.

Note After VMD sensitivity is increased, observe the performance in other lighting conditions in case further adjustments are required to prevent false alarms.

Decreasing Sensitivity

If VMD alarms are triggered even when there is no motion and no significant changes in the video, do the following:

- Increase the **Motion Threshold** level (from 30% to 50%, or from 50% to 80%). This will decrease the sensitivity of the motion detection by increasing the contrast level (amount of noise) required to trigger an alarm. This should be the primary adjustment mechanism.
- Increase the size of the region-of-interest box. This will prevent smaller objects (or smaller areas of noise) from triggering VMD alarms.

Sample Video Motion Detection Configurations

The following examples are provided for illustration purposes only. Factors such as lighting level, contrast, and image noise could affect VMD performance and require further adjustments as described above.

Normal Field of View

In a normal field of view, with a person walking in front of the camera, the maximum recommended region-of-interest box sizes would be as shown by the red boxes in *Figure 4-15*, *Figure 4-16*, and *Figure 4-17*.

Figure 4-15 VMD Configuration (Low Motion Threshold - 30%)

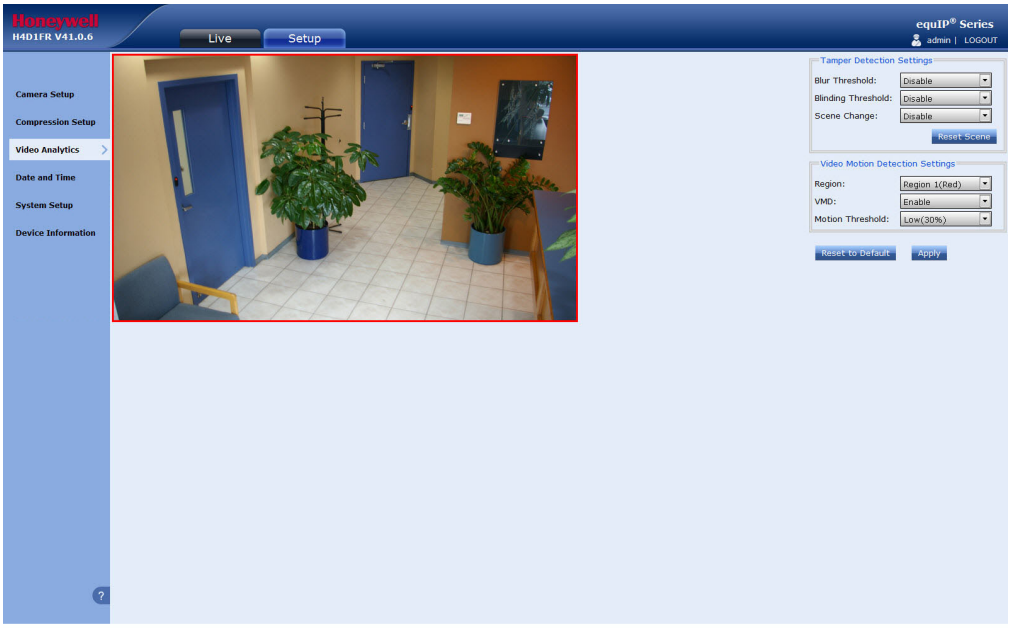


Figure 4-16 VMD Configuration (Medium Motion Threshold - 50%)

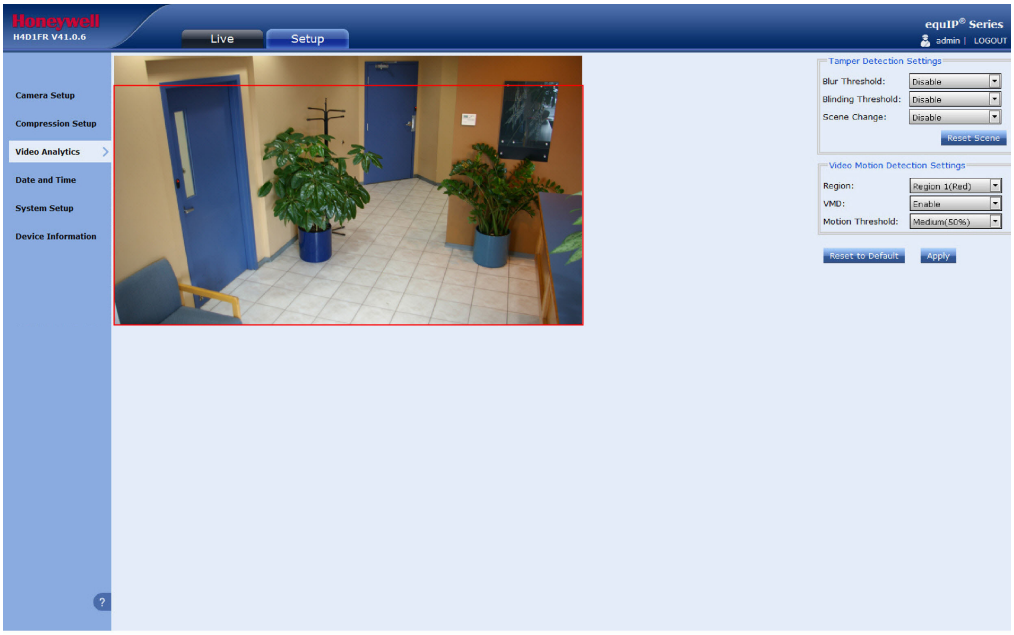


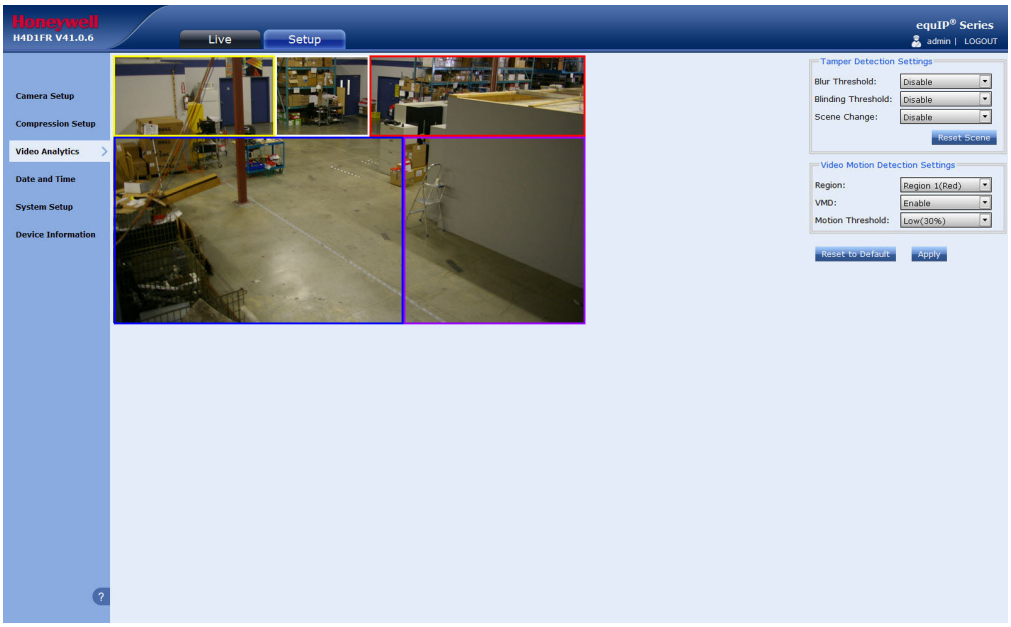
Figure 4-17 VMD Configuration (High Motion Threshold - 80%)

Wide Field of View

For cameras with a wide-angle field of view covering a larger scene, people who walk far away from the camera might appear rather small in the image. If motion needs to be detected in the entire field of view, the following region-of-interest box configuration is recommended:

- Three smaller boxes, set to 30%, covering the upper portion of the image where people appear small.
- Two larger boxes, set to 50%, covering the lower portion of the image where objects appear larger.

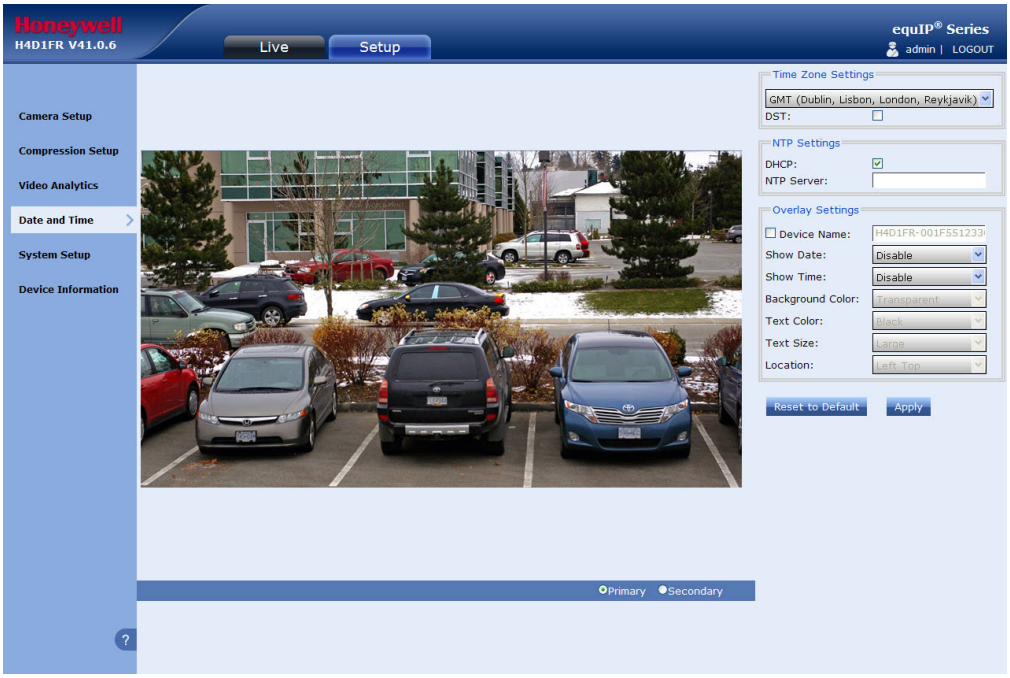
Figure 4-18 VMD Configuration - Combination Setup



Configuring Date and Time

The Date and Time view (*Figure 4-19*) lets you configure the time zone, the NTP server, and text overlay settings.

Figure 4-19 Date and Time View



Setting the Time Zone

To set the time zone

1. Under **Time Zone Settings**, select a time zone for your location from the drop-down list.
2. If you want to activate automatic compensation for Daylight Saving Time, select the **DST** check box.

Setting the Network Time Protocol (NTP) Server

Network Time Protocol (NTP) is a networking protocol for clock synchronization between computer systems over packet-switched, variable-latency data networks. Honeywell ONVIF cameras use NTP to synchronize camera time with an NTP server.

Note Some anti-virus software, such as McAfee, will force-stop the NTP service. Contact your local network administrator and check your anti-virus software filtering policy before using an NTP service.

There are two ways to configure NTP:

- Use a DHCP server to set the NTP server address.
- Specify an NTP server IP address for time synchronization.

DHCP

To use a DHCP server to synchronize time

- Under **NTP Settings**, select the **DHCP** check box.

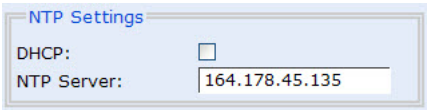
  The camera will try to use your DHCP server to set the NTP server address. Contact your local network administrator to confirm that your DHCP server has either a) installed and enabled the NTP server in your workstation, or b) configured the DHCP server to send NTP server address(es) to clients (most cases).

NTP Server

There are two types of NTP servers you can use to synchronize time: a public NTP server or a local NTP server.

To use a public NTP server to synchronize time

1. Search online for a public NTP server IP address.
2. Enter the IP address of the public NTP server in the **NTP Server** field under **NTP Settings**.



Note Before using a public NTP server, contact your local network administrator to ensure that your network settings and firewall will not block the server.

To use a local NTP server to synchronize time

- Enter the IP address of your local NTP server in the **NTP Server** field under **NTP Settings**.
- Alternatively, install the Meinberg Network Time Protocol software included on the installation DVD that was shipped with your camera. The software synchronizes your computer clock with an external time source (typically another computer running an NTP server) and can also set up your computer as an NTP server from which other computers can synchronize.

Installing the NTP Software Included With Your Camera

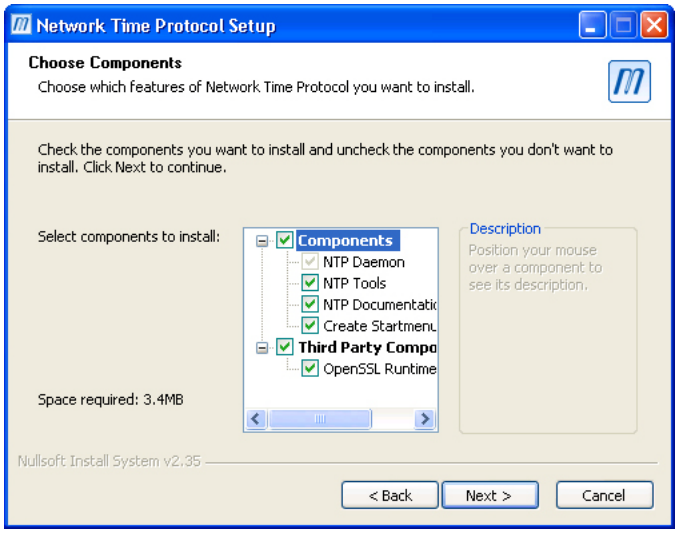
To install the NTP software

1. Insert the DVD that was shipped with your camera into your workstation's DVD-ROM drive, and then browse to the **NTP** folder.
2. Click one of the following setup files:

ntp-4.2.6p5@london-o-lpv-win32-setup.exe	NTP installation package with IPv6 support for XP/ 2003 Server/Vista/Windows 7/Windows Server 2008
ntp-4.2.4p8@lennon-o-lpv-win32-setup.exe	NTP installation package for Windows NT/2000 (IPv4 only)
ntp-time-server-monitor-1.04.exe	An NTP time server monitor program for Windows operating systems that allows configuration of the local NTP service and graphical monitoring of local and remote NTP servers. (Optional)

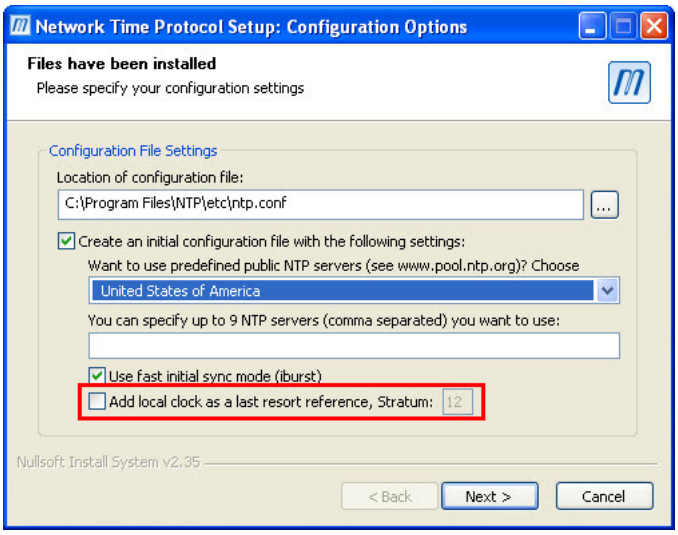
   For most applications, use **ntp-4.2.6p5@london-o-lpv-win32-setup.exe**.
3. Follow the on-screen instructions to install the software.

   On the **Choose Components** screen, click **Next** to install the default set of components.


Network Time Protocol Setup
Choose Components
Choose which features of Network Time Protocol you want to install.
Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.
Select components to install:
Components
NTP Daemon
NTP Tools
NTP Documentatic
Create Startmenu
Third Party Compo
OpenSSL Runtime
Description
Position your mouse over a component to see its description.
Space required: 3.4MB
Nullsoft Install System v2.35
< Back
Next >
Cancel

4. On the **Please specify your configuration settings** screen you must do at least one of the following to specify the NTP servers to synchronize with:

   - If the computer can access public Internet time servers, then under **Want to use predefined public NTP servers** select the closest geographic region to where the computer is installed. If the computer cannot access the public Internet (for example, if it is not connected to the Internet or if a firewall blocks access to the NTP port), then leave this setting as **None**.
   - If you want the computer to be able to synchronize with specific private servers (for example, an NTP server on the corporate network or another computer running the Meinberg NTP service), enter those host names or IP addresses under **You can specify up to 9 NTP servers (comma separated) you want to use**. If you specify more than one computer, separate them with commas.
   - If you want the computer to add the local clock as a last resort reference if both of the above options have not worked because your network security settings have blocked them, select the **Add local clock as a last resort reference** checkbox.


Network Time Protocol Setup: Configuration Options
Files have been installed
Please specify your configuration settings
Configuration File Settings
Location of configuration file:
C:\Program Files\NTP\etc\ntp.conf
...
Create an initial configuration file with the following settings:
Want to use predefined public NTP servers (see www.pool.ntp.org)? Choose
United States of America
You can specify up to 9 NTP servers (comma separated) you want to use:
Use fast initial sync mode (iburst)
Add local clock as a last resort reference, Stratum:
12
Nullsoft Install System v2.35
< Back
Next >
Cancel

Click to select **Add local clock as a last resort reference**

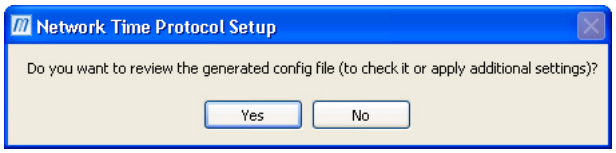
You can set up all three options, if appropriate. The NTP service automatically polls all of them and selects the best one to synchronize with.

If the computers that need to have synchronized clocks all have access to public Internet time servers, then you can have all of them synchronize with the same servers.

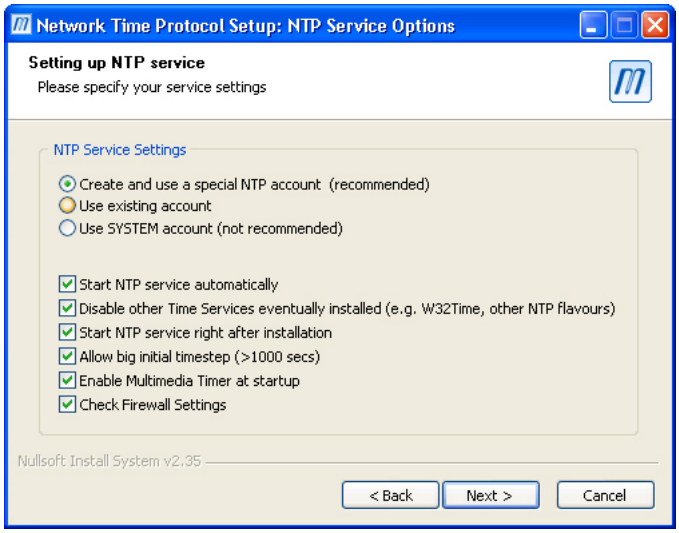
If most of the computers do not have access to an NTP server, then you can select one computer (for example, the Alarm Management Server) to be the time source, and have it access a reliable NTP server, via the Internet, a corporate intranet, or even a hardware radio clock.

Note NTP uses UDP on port 123, so this port must be unblocked on the computer you select to act as the time server for the other computers to synchronize with.

5. When prompted to review the generated confide file, click **No**.

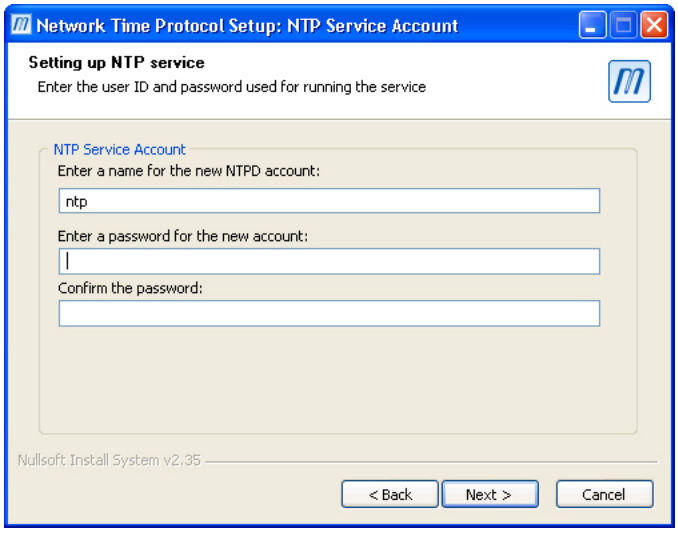

Network Time Protocol Setup
Do you want to review the generated config file (to check it or apply additional settings)?
Yes
No

6. On the **NTP Service Options** screen, accept the defaults, and then click **Next**.


Network Time Protocol Setup: NTP Service Options
Setting up NTP service
Please specify your service settings
NTP Service Settings
Create and use a special NTP account (recommended)
Use existing account
Use SYSTEM account (not recommended)
Start NTP service automatically
Disable other Time Services eventually installed (e.g. W32Time, other NTP flavours)
Start NTP service right after installation
Allow big initial timestep (>1000 secs)
Enable Multimedia Timer at startup
Check Firewall Settings
Nullsoft Install System v2.35
< Back
Next >
Cancel

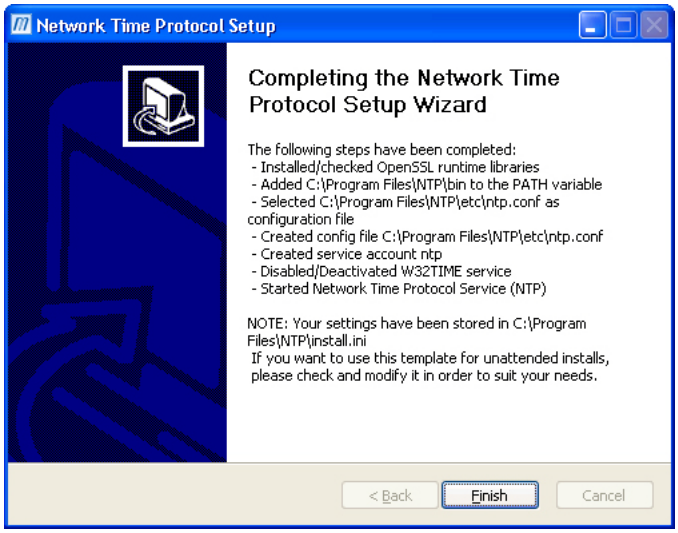
7. On the **Enter the user ID and password used for running the service** screen enter a password for the NTPD account, and then click **Next**.

Note Enter a strong security password, such as **ASDFGhjkl;'**, or you will get an error (code 2245).


Network Time Protocol Setup: NTP Service Account
Setting up NTP service
Enter the user ID and password used for running the service
NTP Service Account
Enter a name for the new NTPD account:
ntp
Enter a password for the new account:
Confirm the password:
Nullsoft Install System v2.35
< Back
Next >
Cancel

After clicking **Next**, if a message appears indicating that the computer policy does not allow you to create a new user account, click **Back** and select one of the other account options (either **Use existing account** or **Use SYSTEM account**) from the top of the **Please specify your service settings** screen.

8. Click **Finish**.


Network Time Protocol Setup
Completing the Network Time Protocol Setup Wizard
The following steps have been completed:
- Installed/checked OpenSSL runtime libraries
- Added C:\Program Files\NTP\bin to the PATH variable
- Selected C:\Program Files\NTP\etc\ntp.conf as configuration file
- Created config file C:\Program Files\NTP\etc\ntp.conf
- Created service account ntp
- Disabled/Deactivated W32TIME service
- Started Network Time Protocol Service (NTP)
NOTE: Your settings have been stored in C:\Program Files\NTP\install.ini
If you want to use this template for unattended installs, please check and modify it in order to suit your needs.
< Back
Finish
Cancel

Installing an NTP Time Server Monitor (Optional)

If you want, you can also install an NTP time server monitor program that lets you configure local NTP service and monitor local and remote NTP servers.

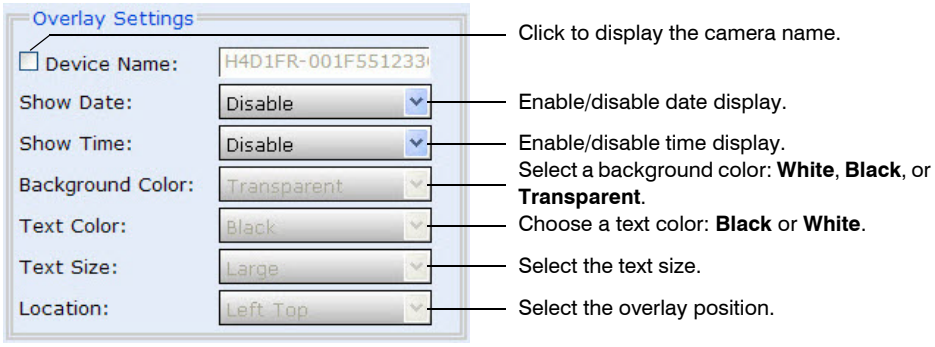
To install the NTP Time Server Monitor

1. Insert the DVD that was shipped with your camera into your workstation's DVD-ROM drive, and then browse to the **NTP** folder.
2. Double-click **ntp-time-server-monitor-1.04.exe**.
3. Follow the on-screen instructions to install the software.

For more information, visit *http://www.meinbergglobal.com* and click **Support ➤ Software Download ➤ NTP Download**.

Overlay Settings

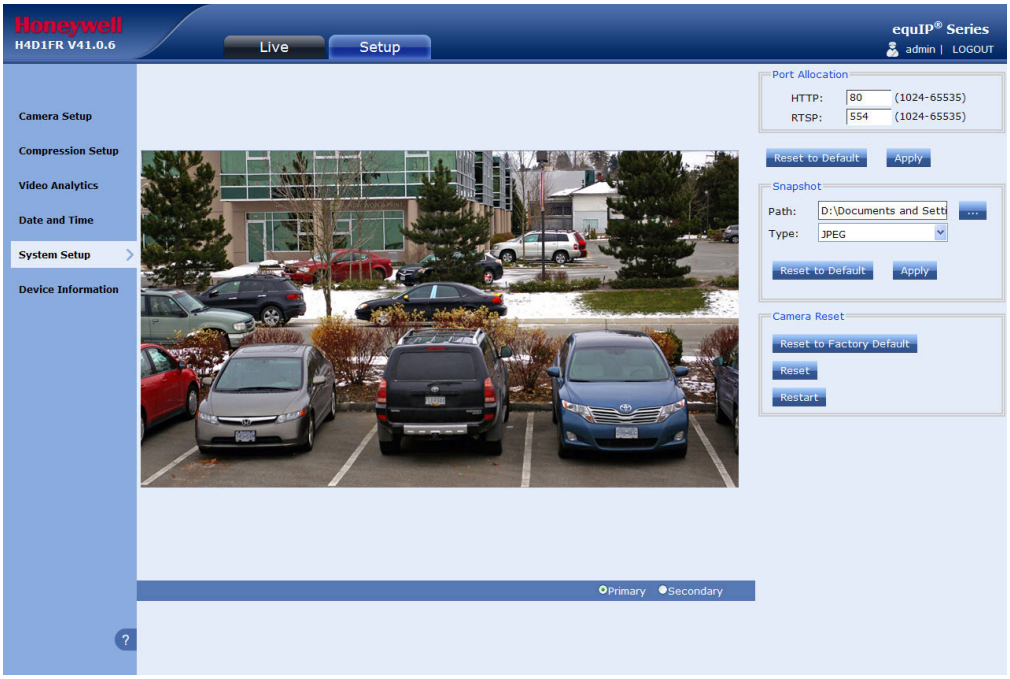
In the **Overlay Settings** area you can configure the appearance of on-screen text, including color, size, and location.



System Setup

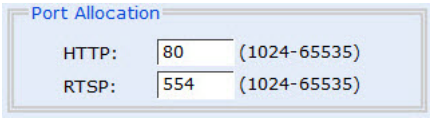
The System Setup view (*Figure 4-20*) lets you configure port allocation settings and the snapshot file type and save path (Internet Explorer only). You can also reset the camera to factory defaults and restart the camera from this screen.

Figure 4-20 System Setup View



Setting the Port Allocation

In the **Port Allocation** area you can enter values for the HTTP and RTSP ports.



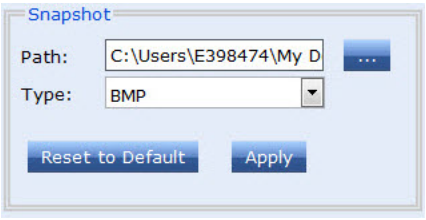
If you are running the web client in Chrome or Firefox, note that the following ports are blocked:

Ports Blocked by Chrome
2049, // nfs
3659, // apple-sasl / PasswordServer
4045, // lockd
6000, // X11
6665, // Alternate IRC [Apple addition]
6666, // Alternate IRC [Apple addition]
6667, // Standard IRC [Apple addition]
6668, // Alternate IRC [Apple addition]
6669, // Alternate IRC [Apple addition]

Ports Blocked by Firefox
2049, // nfs
4045, // lockd
6000, // X11

Setting the Snapshot File Type and Path (Internet Explorer Only)

In the **Snapshot** area you can set the file type and save path for snapshots.

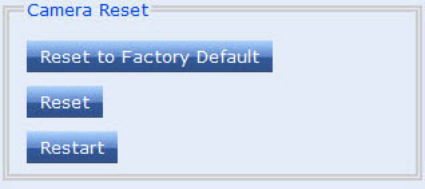


1. Next to **Path**, click ... to choose a save path.
2. Next to **Type**, select either BMP or JPEG (JPEG is the default file type).
3. Click **Apply** to save the changes.

Note In Google Chrome and Mozilla Firefox, the snapshot file type and save path are set when saving the snapshot (see *Taking a Snapshot* on page 47).

Resetting and Rebooting the Camera

In the **Camera Reset** area there are three options for resetting the camera.



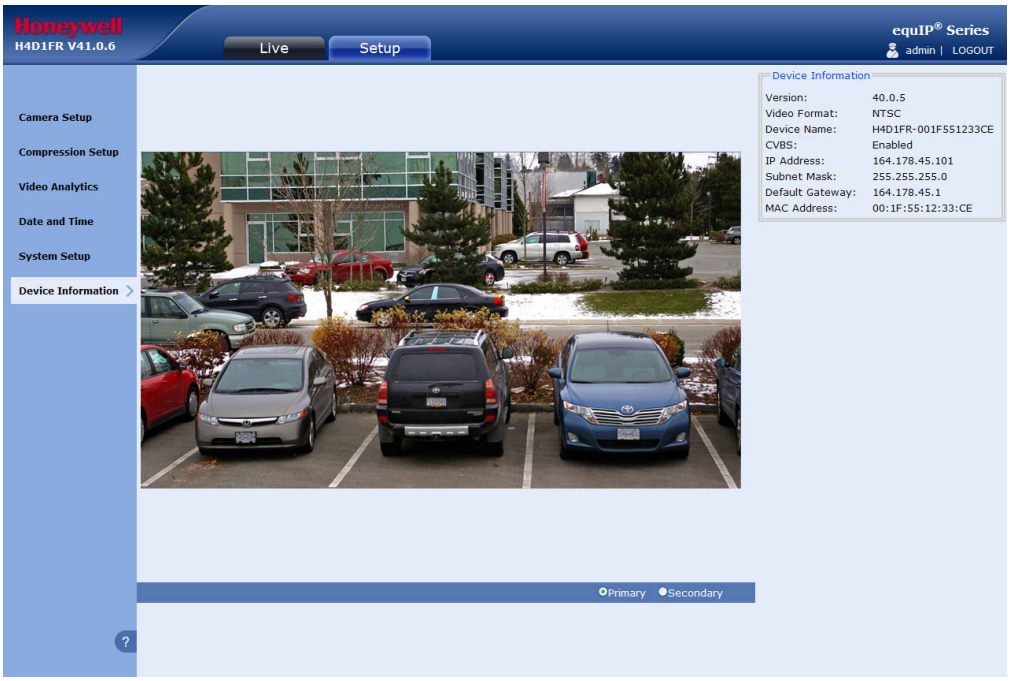
Reset to Factory Defaults	Resets the camera to the factory defaults, including the network settings.
Reset	Resets the camera to the factory defaults, except the network settings.
Restart	Restarts the camera while maintaining the existing configurations.

Note Each of these functions takes approximately two minutes to complete. During that time, the camera's connection to the web client is lost.

Viewing Device Information

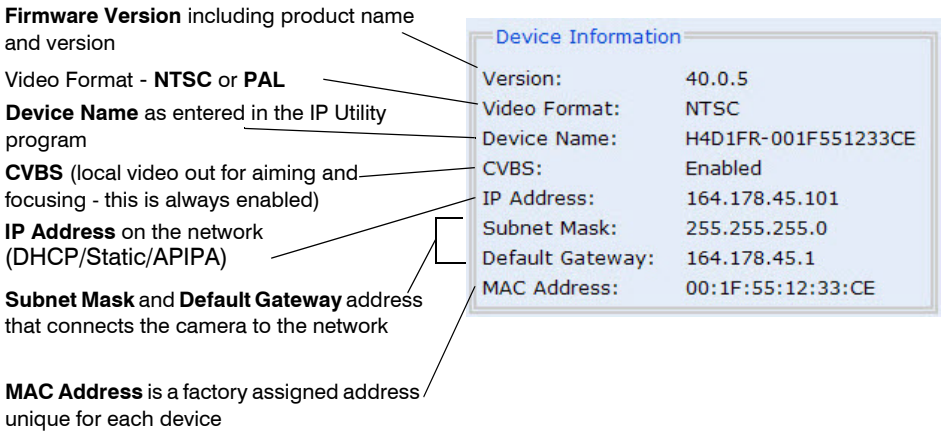
The Device Information view (*Figure 4-21*) displays the network settings and firmware details of the camera.

Figure 4-21 Device Information View



In the **Device Information** area you can view read-only network settings, firmware settings, and video formats for the camera without having to access the IP Utility (*Figure 4-22*).

Figure 4-22 IP and Firmware Settings


Firmware Version including product name and version
Video Format - NTSC or PAL
Device Name as entered in the IP Utility program
CVBS (local video out for aiming and focusing - this is always enabled)
IP Address on the network (DHCP/Static/APIPA)
Subnet Mask and Default Gateway address that connects the camera to the network
MAC Address is a factory assigned address unique for each device
Device Information
Version: 40.0.5
Video Format: NTSC
Device Name: H4D1FR-001F551233CE
CVBS: Enabled
IP Address: 164.178.45.101
Subnet Mask: 255.255.255.0
Default Gateway: 164.178.45.1
MAC Address: 00:1F:55:12:33:CE

Logging Out of the Web Client

To log out of the web client

- Click **LOGOUT** in the upper right corner of the web client window.

Uninstalling Honeywell ONVIF ActiveX (Internet Explorer)

To uninstall the IP Utility in Windows 7

1. Click the **Start** button, click **Control Panel**, click **Programs**, and then click **Programs and Features**.
2. Click **Honeywell ONVIF ActiveX**, and then click **Uninstall**.

   If you are prompted to confirm that you want to uninstall the application, click **Yes**.

To uninstall the IP Utility in Windows XP

1. Click **Start**, click **Control Panel**, and then double-click **Add or Remove Programs**.
2. Click **Honeywell ONVIF ActiveX**, and then click **Remove**.
3. You are prompted to confirm that you want to uninstall the application. Click **Yes**.

Uninstalling VLC Media Player (Chrome and Firefox)

To uninstall VLC media player in Windows 7

1. Click the **Start** button, click **Control Panel**, click **Programs**, and then click **Programs and Features**.
2. Click **VLC media player 2.0.5**, and then click **Uninstall**.

   If you are prompted to confirm that you want to uninstall the application, click **Yes**.

To uninstall VLC media player in Windows XP

1. Click **Start**, click **Control Panel**, and then double-click **Add or Remove Programs**.
2. Click **VLC media player 2.0.5**, and then click **Remove**.
3. You are prompted to confirm that you want to uninstall the application. Click **Yes**.

A

Troubleshooting

If you encounter an issue with your camera, please read this section first. If you require additional assistance, call **1-800-323-4576** (North America only) or send an email to **https://honeywellsystems.com/ss/techsupp/index.html**. See the back cover for international contact information.

Any equipment returned to Honeywell Video Systems for warranty or service repair must have a Return Merchandise Authorization (RMA) number. The RMA number must be clearly marked on all return packages and internal paperwork.

Lens not in optical focus	• Check that the lens cap has been removed from the camera. • Check the lens and bubble for dust, fingerprints, etc., and clean if needed. **Note** Use care when cleaning the lens and bubble that you do not scratch them. Use a soft cloth or lens cleaning paper with alcohol or lens cleaning liquid, and move in a spiral motion from the center outward. Repeat until the lens is completely clean.
Live View does not display video	• Check that your web browser settings have been configured to allow ActiveX controls • Check that the network cable from the camera is connected to both the camera and the network. • Check that the camera assembly board DIP switch settings are configured correctly.
IP Utility installation fails	• Disable Norton AntiVirus software, if present. • Check that Microsoft .NET Framework 3.5 is enabled on your PC.
Cannot connect to a device	• Your PC and the device you are connecting to may be on different subnets. Contact your network administrator for assistance.

B

Specifications

Note These specifications are subject to change without notice.

Video Signal	
Video Standard	NTSC/PAL
Scanning System	Progressive scan
Image Sensor	1/4-in. CMOS
Number of Pixels (H×V)	1280 × 720
Minimum Illumination	0.25 lux color / 0.22 lux BW @ 50 IRE, F1.4 0.11 lux color / 0.09 lux BW @ 30 IRE, F1.4 0 lux with IR LEDs on
Video Output	1.0 *V*p-p, 75 ohms
S/N Ratio	50 dB or more (AGC off)
Auto Gain Control	On/Off, selectable (10–40 dB)
Auto Electronic Shutter	1/60–1/24,500 s (NTSC) 1/50–1/24,500 s (PAL)
Lens Type	3.3–12 mm VFAI, F1.4
Auto Lens Iris Control	DC iris level 1–25
IR LEDs	850 nm, 24 LEDs
IR Illumination Distance	Up to 50 ft (15 m), depending on scene reflectance
White Balance	AWC, AWC Push, Manual

Electrical	
Input Voltage	24 V AC, PoE IEEE 802.3af, Class 1
Input Voltage Range	17–28 V AC
Surge Suppression	1.5 kW transient
Power Consumption	24 V AC: 3.5 W (max.) PoE: PD Type 1 Class 1

Mechanical	
Dimensions (W × H)	6.13 × 4.63 in. (154.94 × 117.1 mm)
Weight	3.0 lb (1.3 kg) camera only
Construction	Housing: Die-cast aluminum Finish: Cool gray powder coating Dome Cover: Polycarbonate
Connector	Aux video output: 2-pin Molex connector Power input: Removable screw terminal block Network: RJ45 connector

Environmental	
Temperature	Operating: -13°F to 131°F (-25°C to 55°C) Storage: -40°F to 158°F (-40°C to 70°C)
Relative Humidity	0% to 85%, non-condensing
Rating	IP66

Network	
Video Compression	Dual stream H.264 and/or H.264/MJPEG
Resolution	Primary Stream: 1280×720, 800×450, 640×360, 320×180
Software Update	Field upgradeable
Frame Rate	Up to 30 fps (NTSC) / Up to 25 fps (PAL)
Video Streaming	Dual streaming: H.264 and/or H.264/MJPEG Controllable frame rate and bandwidth
Security	Multiple user access levels with password protection
Video Access from Web Browser	Full control of all camera settings available to administrator
Minimum Browsing Requirements	Pentium 4 CPU 3.1 GHz or faster, 1 GB RAM (32 bit) or 2 GB RAM (64 bit), Windows 7 (32/64 bit), Windows Server 2008 R2 (64 bit), Windows Vista SP1, Windows Server 2003 R2 (32 bit), Windows XP Professional SP3, Internet Explorer 8 or 9, Google Chrome v23.0.1271.97 or later, Mozilla Firefox v17.01 or later
Installation, Management, and Maintenance	Honeywell IP Utility software identifies the IP address, checks device status, and upgrades firmware over HTTP. Available at www.honeywellsystems.com/support/download-center/index.html
Supported Protocols	HTTP, TCP, RTSP, RTP, UDP, ARP, DNS, NTP, RTCP, FTP, ICMP, DHCP, Bonjour, IGMP, SSH
Standards	ONVIF (Profile S)

Regulatory	
Emissions	FCC Part 15B, EN 55022
Immunity	EN 50130-4
Safety	EN 60950-1 North America ETL listed to UL/CSA 60950-1

Mount Accessories	
HD4CHIP-PK	Pendant mount bracket
HD4CHIP-WK	Wall mount bracket

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Honeywell

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